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ABSTRACT

IMPACT II is a program administered by the New York City Board of Education designed to identify, support, document, describe, and replicate successful classroom-based programs developed by teachers. During the first year of IMPACT II, approximately 100 exemplary programs were identified. This publication is a collection of profiles of these programs. The profiles document and describe each program and are organized by elementary, junior high and high school levels, with a separate section for special education. Within these categories, program profiles are ordered by subject area, including: art, bilingual education, career and occupational education, communication arts, foreign language, health education, library media, mathematics, physical education, science, and social studies. Listed at the end of each exemplary program profile are the originating teacher's name, the address and telephone number of his or her school, and the school principal's name. (Author/GC)

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IMPACT II
Catalog of Programs
1979-1980

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Division of Curriculum and Instruction

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"Art and Nature," workshop in Central Park
Photo: Grace George Alexander-Greene

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"Student Wide News Reporting," P.S. 155, Brooklyn
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Foreword

It is a privilege to introduce the IMPACT II catalogue of teacher innovations. For 13 years, business executives have worked through the Economic Development Council of New York City, Inc., to help principals, teachers and students solve some of the many problems which plague urban public schools. This relationship has provided a golden opportunity for outsiders to see at close hand what really happens in classrooms. Many problems have been found, and some have been solved. Of equal importance, however, has been the discovery, unexpected by business people, that many classrooms and schools are achieving outstanding results under very difficult conditions.

The identification and spread of such outstanding practices is a logical outcome of earlier efforts to focus on problems. For many years, progressive educators have been engaged in dissemination and publication activities. However, it has been frustrating to see the slow rate of acceptance and spread of innovations. Among several recent efforts to speed the process of replication of exemplary classroom programs is PROPED (for Proficiency-based Public Education), a collaborative effort of the New York City Board of Education, the United Federation of Teachers and the Economic Development Council.

The implementation of IMPACT II further demonstrates the value of collaborative efforts. Administered by the New York City Board of Education, funded by Exxon Education Foundation and facilitated by the Economic Development Council and the United Federation of Teachers, IMPACT II is off to a strong start. Space for teacher-to-teacher workshops has been provided by the business community, the UFT and public libraries and museums. The United Federation of Teachers news organ, *The New York Teacher,* has been a vital conduit, informing teachers about IMPACT II objectives, programs and schedules.

With the publication of this catalog, the first phase of IMPACT II ends. The classroom programs described herein must become vehicles for the spread of innovative practices to other classrooms. The catalog is intended for use by teachers right at their desks. As teachers use the catalog and adopt new practices, the IMPACT II objective of sharing their original idea with each other will be achieved.

LLOYD COOKE, Vice Chairman
Economic Development Council of New York, Inc.

Acknowledgments

The *IMPACT II Catalog of Programs 1979-80* was prepared as a project of the Division of Curriculum and Instruction, Charlotte Frank, Executive Director (Acting). The project was begun in Spring 1979 under Arnold Webb, who was then Executive Director of the Division of Curriculum and Instruction, and Nola Whiteman, who was then the Deputy Executive Director.

Grateful appreciation is extended to all of the teachers whose programs are presented in this publication. Each one of them spent many hours working with our writers and editors to help develop the individual program profiles. This publication could not have come into existence without their expertise and cooperation. Ellen Dempsey, Program Director for IMPACT II, provided overall supervision of the publication and Deidre Grose, Program Assistant, coordinated the efforts of the teachers, writers and editors.

Sincere appreciation is extended to consultant Peter Britton, who edited and styled the publication. The original format for the profiles was designed by Gretchen Dykstra who also served as an interviewer and writer of many of the profiles. Marianne David, Lawrence DuKore and Carol Fineberg are the other consultant writers who spent many hours interviewing teachers and writing their program profiles. Jim Feldman, designer of the publication, provided overall direction of all graphic work.

Introduction

"A teacher's enthusiasm is crucial to the success of the classroom, and one way to sustain enthusiasm is to continue to learn yourself."

Sonya Cooperman, Teacher

"Once you ask children what they think and then put them in front of a public address system, something magical happens."

Rosa DuCree, Teacher

"I wanted to spark their imagination and take mathematics into areas they could relate to."

Robyn Forman, Teacher

As our culture evolves, students' classroom needs change, frequently more swiftly than formal educational machinery can accommodate. Teachers are often the first to sense those needs and devise programs to satisfy them. Such firing-line improvisation is very much part of the educational system, providing fresh approaches to the teaching of subject areas.

More precisely, the IMPACT II Program is designed to identify, support, document, describe and replicate successful classroom-based programs developed by teachers. It is founded on the philosophy that many successful programs start in the classroom and that teacher-to-teacher interaction can be a most effective method for sharing information about these classroom-based courses. IMPACT II was created to enable New York City public school teachers to learn about successful programs developed by other teachers and to foster the spread of those programs to other classrooms. The concept is modeled on a previous project titled IMPACT, which was designed for colleges and universities and was founded and administered by Exxon Corporation's Education Foundation.

During this first year of IMPACT II, approximately 100 exemplary programs were identified according to criteria developed by a review committee composed of teachers and representatives from administrative, supervisory, parent and community groups. Teachers whose programs were identified as successful were assisted in packaging their programs for dissemination. Many teachers have already led workshops designed to share information with other teachers. And there are many more teacher-originated programs of significant value that have yet to be reported.

This publication, *IMPACT II Catalog of Programs 1979-80*, is a collection of profiles of the programs that were identified as exemplary. The teachers who developed them received developer grants for producing the materials needed for dissemination. The profiles carefully document and describe each program. They are organized by elementary, junior high and high school levels with a section for special education. Within these categories, program profiles are listed by subject area as related to the *Minimum Teaching Essentials* curriculum bulletin (published by the New York City Board of Education's Office of Curriculum Development and Support), and alphabetically under the teacher's name. Interdisciplinary program profiles appear under the teacher's license area.

Listed at the end of each profile are the originating teacher's name, the address and telephone number of his or her school, and the principal's name. Additional sample materials about the programs can be obtained by contacting the teacher involved. Also, those teachers and principals who wish to replicate and adapt an IMPACT II program in their particular school may contact the IMPACT II office for assistance. The staff can arrange for teacher consultant time so that workshops and intervisitations may be set up. Staff consultation is available to help obtain materials and services necessary to implement the program.

IMPACT II is administered by the New York City Board of Education's Division of Curriculum and Instruction, Office of Special Projects, in cooperation with the Economic Development Council. Funds are provided by a grant from Exxon Education Foundation. Additional information may be obtained by contacting:

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Impact II Teacher Developed Programs

Elementary School

"**Movement Education,**" workshop at The Feld Ballet
Photo: John Nolan

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Elementary School Social Studies

Grades 2 through 4

Mask Making

The Program

Mask making is a two-month unit in program originator Carole Stein's social studies program and, at the same time, the backbone of an imaginative and extended interdisciplinary curriculum. Her students concentrate on Africa, but mask making can be an appropriate vehicle to study most cultures. Mask making allows students to discuss and analyze the functions of masks in a culture. Students discuss the psychological and symbolic components in masks, and use them to express their own feelings. Each student makes one mask during the program. Every step in the process is approached creatively though methodically, so that the final product is one which pleases the student and provides a tool for continued creative learning. The students use the masks as the basis for projects in storytelling, creative writing, drama and poetry writing. During the actual making of the masks, Stein also introduces certain mathematical concepts that use symmetry and geometrical figures.

The Students

Fifteen second graders in a transitional class participate in this creative, interdisciplinary approach to social studies. The program has also been done with 30 third-graders. The school maintains a policy of open enrollment, with mostly black and Hispanic students from a variety of academic levels. The program is individualized and consequently appropriate for any student.

The Staff

Stein has been a classroom teacher for eight years. She maintains that she has absolutely "no artistic training or artistic skill." She was initially stimulated to try mask making with her students by an artist who had a short-term residence in the school in 1977. Stein has no paraprofesional or volunteer aid. She does, however, receive enthusiastic support from her principal, who is very much attuned to the idea of using arts in education.

Materials and Facilities

A room with running water is helpful, but not necessary. Aluminum foil, Paris craft, papier-mache, paint, varnish and other materials scrounged for decoration are needed. Paris craft is relatively expensive (papier-mache can be substituted), but all other materials are easily available in most schools and homes.

Outside Resources

The Brooklyn Museum offers an excellent tour (with a special guide) of its superlative mask collection. The American Museum of Natural History and The Museum of the American Indian also have superb mask collections, and visits there are recommended. The New York City third-grade curriculum guide briefly discusses masks and their possible use in the classroom. A selected bibliography includes:

Glubok, Shirley. *The Art of Africa.* New York: Harper & Row, 1965.
Fraser, Douglas. *Primitive Art.* New York: Doubleday & Co., 1962.

Overall Value

Stein says that the concept of mask making as a theme in a study unit about cultures is unfamiliar to most New York City teachers. But she emphasizes mask making spurs creativity and individuality and fosters pride and achievement in her students. "Enthusiasm and high interest are built in to mask making," she says, "and it provides a pleasant and legitimate way to study other cultures. The myriad related activities is another attractive aspect of the process, and the students always end up with a product of which they are proud and which reveals inner character in a powerful way."

More Information

Carole Stein
P.S. 152K
2310 Glenwood Road
Brooklyn, NY 11210

Telephone: 434-5222

Principal: Herbert Shapiro

Elementary School Art

Grades 3 through 6

Murals

The Program

Through the creation of two three-by-six-foot murals by a class of 30 students, program originator Nancy Wallach combines the teaching of art and design with literature and geometry. Her Murals program provides exposure to mapping, graphing, symmetry and geometry through the group effort. The first mural involves a large piece of brown paper or corrugated cardboard which the students measure into four equal panels. Then the students do free-hand interpretive drawings of figures from a folk tale (e.g., African) or other relevant subjects. The children identify the geometric shapes that make up the masks and costumes of the figures. Then they count and analyze the sequencing of these shapes in order to draw them. They use a collage of fabric and patterned papers, string art and painting to produce a mixed-media mural. The second mural is the result of a geometric design which the class produces on a large grid. They use mapping and graphing skills and follow written directions involving many symbols. The first step in the actual production of this mural is to break it down into elements of color and shape. "Then," says Wallach, "the children can manipulate, organize and develop aesthetic judgments and sensitivity." The entire program is designed to be responsive to particular classes and grades.

The Students

Three student leaders are involved at a time, rotating with a minimum of six other students to whom they teach the making of the mural. These students represent every achievement level and range in grades from three to nine. The average class consists of 30 students, meeting five times a week. Their backgrounds are mainly black and Hispanic. One or two students are trained to coordinate the mural, especially in terms of color and pattern choices. The final decision for the make-up of the mural is made by the mural committee.

The Staff

Wallach, who developed and implemented this program, has been a teacher for 10 years. She has received several mini-grants from District 22 for art programs. While this is a one-person operation, the school principal is particularly helpful in lending interest and encouragement to activities in the arts.

Materials and Facilities

Art suplies needed are glue, fabric, paste, scissors, yarn, large brown paper, tin foil, assorted textures and yarns of various weights and colors.

Outside Resources

Art museums are excellent to visit on field trips. The Cooper-Hewitt Museum and the Museum of the American Indian are two especially fine resources. The books used are *Let's Work Large* by Henry Pluckrose, Dover's *Designs for Craftsmen*, picture books of African or Indian masks and costumes where symmetry is employed, and coloring books showing computer designs.

Overall Value

A mural is made to be displayed, and Wallach's mural students have already exhibited at Lever House and at the school. The students experience pride in their work, and their self-image (as individuals and as part of the group effort) is greatly enriched. Furthermore, advanced students are encouraged to help beginning or slow students, and this often results in beneficial learning and social relationships. The students are able to contribute to their school environment by the display of their work in such school areas as lunchrooms and auditoriums.

More Information

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Principal: Herbert Shapiro

Elementary School Bilingual Learning

Grades Pre-Kindergarten and Kindergarten

The Program

The Bilingual Pre-Kindergarten and Kindergarten Program at P.S. 25 in the Bronx is a complete and well-coordinated open classroom course based on learning centers which the students are free to use at their own pace. The single teacher is in control of the class, but is not directive in an obvious sense. Program originator Marsha Van Benschoten believes strongly in the basic right of children to learn for themselves and to grow through a multitude of experiences. Cooking, sand play, blocks, playing house, sewing, art, reading, mathematics, audio-visual, animals and woodworking make up the main areas. Van Benschoten is careful not to be overwhelming or expect too much too soon. She directs certain children to areas she feel they would enjoy and benefit from. The class uses English and Spanish interchangeably, depending on the particular lesson or activity at the moment. For example, she is careful to use Spanish to establish all rules and routines if the class is Spanish-dominant.

The Students

There are 22 to 25 four- and five-year-olds in these bilingual classes in two separate sessions each day. The students are mostly Puerto Rican, but not all are dominant in Spanish. The classes are, therefore, truly bilingual. Most of the children have not had any school prior to entering this course.

The Staff

Van Benschoten has been teaching off and on for nine years. She speaks Spanish fluently and, although she began teaching in a traditional mode, she is now an accomplished open-classroom teacher (she credits courses at the Community Resources Institute for helping her realize her potential as an open-classroom teacher). She has the language skill and calm temperament to work in such a program. Under new funding available this year, there is a paraprofessional assigned to the pre-kindergarten and kindergarten classes on a full-time basis. The program calls for teachers who are energetic, understanding of child psychology and development, and flexible. There are unlimited possibilities for expanding the program; Van Benschoten has recently introduced creative movement and music. But an on-site visit is mandatory to fully appreciate this program. Van Benschoten works with a principal who is a strong advocate of bilingual education and personally involved in the class activities of all the children. The school is totally bilingual.

Materials and Facilities

Materials are numerous and always increasing. Facilities are nothing more than a regular classroom that has been decorated to encourage individual pursuits as well as group activities and discussions.

Outside Resources

A selected bibliography includes:

Learning, The Magazine for Creative Teaching. Palo Alto, CA: Education Today Company, Inc.

Baratta-Lorton, Mary. *Workjobs* and *Workjobs II.* Menlo Park, CA: Addison-Wesley, 1979.

Blance, Ellen, and Cook, Ann. *The Monster Books.* Glendale, CA: Bowmar, 1973 (English), 1974 (Spanish).

A complete bibliography is available on request.

Overall Value

"I cannot understand why every kindergarten is not this way," says Van Benschoten. She feels that it is essential that a child's first experience with school be well balanced between intellectual, social, emotional, physical and aesthetic development. It is important, she feels, that they experience a loving and nurturing atmosphere which encourages them to try many different things. She is totally committed to Spanish-speaking children maintaining their language and culture while they also acquire the English langauge skills.

More Information

Marsha Van Benschoten
P.S. 25
811 East 149th Street
Bronx, NY 10455

Telephone: 665-9686

Principal: Luis Cartagena

Elementary School Reading

Grades 4 and 5

Listening Skills Improvement

The Program

This program is designed to improve students' listening skills. Students listen to a story that has been pre-recorded by the teacher. Then, they receive instructions from the tape concerning exercises and questions about the story's theme, vocabulary, sequence of events, main idea, details, and conclusions drawn from the story. Finally, the teacher reviews the questions and answers. There is no way that a student can perform any of the exercises or answer any of the questions without listening fully to the taped story. Instructions and questions start out simply, then gradually become more complex as skills improve. Program originator Anita Chassen maintains a careful record of each student's performance which shows progress on a weekly basis. Because of the small groups, special help can also be given. As Chassen explains, "Children hear but don't listen. This program makes them listen."

The Students

These are fourth- and fifth-grade Reading Diagnostic Program students who are reading two or more years below grade level. Each group has about 12 students, divided into groups of three or four each so that different students are performing different tasks.

The Staff

One teacher can supervise the entire program. Even though there are several separate activities (listening to cassettes, drill work, written exercises with on-the-spot corrections), the small number of students and the tasks themselves make for a smooth, one-person operation.

Materials and Facilities

A cassette tape recorder, cassettes, head sets for the students and a junction box (a master switchboard) are all that are needed. The stories themselves must be selected with an eye toward their motivational impact. If the stories are not compelling and if the reader is not good, the children will quickly lose interest and stop listening.

Outside Resources

Chassen recommends a series of kits called "Search" and "Challenge" (Random House).

Overall Value

This program sharpens the listening skills of children, increases their ability to follow auditory directions, and improves basic comprehension skills. Children show high motivation because of on-the-spot reinforcement given by the teacher on the tape recorder.

More Information

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Reading Diagnostic Program
P.S. 37
179-37 137th Avenue
Jamaica, NY 11434

Telephone: 528-5399

Principal: Dr. Lawrence Saken

Elementary School Reading Language Arts Program

Grade 6

Dial 21 Reading

The Program

Dial 21 Reading uses popular TV programs ("Star Trek," "Six Million Dollar Man," "I Love Lucy") together with their scripts as a motivational tool to teach reading. Every other day, a five-minute video-tape segment is shown to the class, while the corresponding script is used to teach reading skills. Characters' emotions and traits are dealt with both as images and as words on a page. Students derive the meaning of new vocabulary words from the context; they learn about the sequence of actions and events; they act out scripts and write new scripts for such programs as "Lucy." They also learn about commercials and create their own, which are video-taped and shown back to them. Sample lessons are available for teachers interested in this program.

The Students

Four sixth-grade classes (approximately 120 students) participate in this program for one period every day. The multi-ethnic students, including many recent immigrants, have a wide range of reading levels from 3.5 to 10.

The Staff

Paul Cohen, a regular sixth-grade teacher with 10 years' experience, helped develop this program together with several staff members. Four of them teach reading classes, each following a similar approach that may vary slightly, depending on the individual teaching style and maturity level of the class. The administration is very supportive and allows extensive teacher creativity. No special training is necessary for teachers wishing to replicate this program.

Materials and Facilities

Video equipment and tapes of programs are needed, in addition to scripts for each student. Each participating class spends some time every other day in the room with the video-tape machine. Other materials include regular school supplies and arts and crafts materials.

Outside Resources

None are required, although Cohen says, "It would be a good idea to visit a TV station or the Board of Education's WNYE-TV and WNYC radio stations."

Overall Value

Student reading scores have increased significantly. The program provides a great motivational approach to reading and allows teachers individual creativity in developing diverse ways to teach reading through scripts.

More Information

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P.S. 97, District 21
1855 Stillwell Avenue
Brooklyn, NY 11223

Telephone: 372-7393

Principal: Robert Coleman

Elementary School Reading

Grade 6

Reading Enrichment and the Classics

The Program

This is a reading program for intellectually gifted children. The course covers eight literary "classics" and is designed to expand students' reading scope beyond the basal readers. The literature includes George Orwell's *1984*, Mark Twain's *The Prince and the Pauper*, Jack London's *Call of the Wild*, Daniel Keyes' *Flowers for Algernon* (which later became the film, *Charley*), Thomas Bulfinch's *Mythology*, Alexander Dumas' *The Count of Monte Cristo*, J.R. Tolkien's *Fellowship of the Ring* and Wm. Shakespeare's *Romeo and Juliet*. These books are read in the first 20 sessions. The 21st session is devoted to book reports and drawings for book jackets. The next session involves students writing letters to the author in which they change the book's ending and justify that change. In the final session students compare two of the books covered in the course, discuss the authors' background, and the historical background of the books. Literal and interpretative approaches are used in each of the required readings. Students maintain question-and answer notebooks. Lists of the questions are available for replication. The program is designed to provide the student with a wide range of reading selections that stimulate critical thinking.

The Students

The program includes 32 above-average multi-ethnic students in the sixth grade who meet for one period five times a week. Their reading level is at least two years above their grade level. Some students have a 12th-grade reading ability.

The Staff

Stewart Cohen, with 10 years of teaching experience, developed and implemented this program. The idea evolved out of his fifth-grade class becoming his sixth-grade class and rapidly going through all of the existing reading material.

Materials and Facilities

The basic materials are the eight books listed above, although others may be substituted. The question-and-answer notebooks for the students are equally important. Once a teacher has prepared the questions and activities for the particular book, the program can be repeated annually at a minimal cost.

Outside Resources

None are needed.

Overall Value

Teachers receive positive parental feedback because of the students' ability to meet intellectual challenges that extend their reading abilities. Attendance is never below 97 percent all year.

More Information

Stewart Cohen
P.S. 270, District 13
241 Emerson Place
Brooklyn, NY 11205

Telephone: 834-6920

Principal: Aileen James

Elementary School Reading

Grade 2

Early Childhood Reading Program

The Program

This is an enrichment reading program which systematically exposes students to a wide range of experiences, cultures, places, people, careers and ideas. It relies heavily on the teacher's energy and curiosity in collecting, categorizing and working with a great many books. The program, in addition to the regular basal reading program and social studies curriculum, involves interdisciplinary subject areas which are spin-offs from the students' regular program. Sample topics include such subjects as gnomes, cities, art history, countries, space and animals. Depending on what the students are studying at the moment, the teacher chooses a subject area, collects appropriate books, develops questions, and then allows the students to choose which book they will study. The children, working in pairs, read the book and report their findings to the class, which has been studying other aspects of the same area. They cover about 12 to 15 subject areas during the year.

The Students

The second graders are grouped heterogeneously in this open-enrollment school. Last year there were 32 students in the reading class drawn from several different classes which work together in this interdisciplinary approach to learning.

The Staff

Sonya Cooperman developed this approach to reading two years ago. She relies on 21 years' teaching experience, her own curiosity and her own library. There is no paraprofessional or tutorial help. She receives administrative support and encouragement from her principal.

Materials and Facilities

The most important aspect of this program is the collection of books made available to the children. A large classroom library, categorized into subject areas, is ideal. However, a teacher can start modestly, concentrating on just one area which will interest the students and connect in some appropriate way with the ongoing curriculum.

Outside Resources

The class trips which the group takes in the course of the school year provide rich material for this approach to reading. If, for instance, a trip to the zoo is planned, books on animals could constitute the program during the weeks preceding the trip. Such trips expand and enrich any reading and writing experience students have in school.

Overall Value

The teacher feels strongly that children need to experience as many facets of life as possible. The school experience must be a rich one. And a program which supplements a regular reading program is an enrichment. Cooperman also feels that "a teacher's enthusiasm is crucial to the success of the classroom, and one way to sustain enthusiasm is to continue to learn yourself." This program requires a great deal of extra work and a certain tolerance for lack of rigid structure.

More Information

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Springfield Gardens, NY 11314

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Principal: Dorothy Moore

Elementary School Language Arts

Grades 3 and 4

Task Cards

The Program

The program is an approach to teaching involving task cards which follow lessons introduced in class. Task cards are, for the most part, pages that are cut from textbooks and pasted on individual cardboards and filed in bins for students to use in the classroom. Task cards can be used for any curriculum. Program originator Deanna Dauber currently uses them for language arts and is developing a science program. She currently has more than 300 cards in language arts alone. She tries to have a card for each student in each concept area, but that is not necessary. The advantage of the cards is that they can be introduced as lessons are studied and "staggered," unlike a workbook. The cards are also self-correcting, and are keyed to a comprehensive, although basically simple, record-keeping system for teacher and student.

The Students

Twenty students, all members of third- and fourth-grade transitional classes, participated this year. The classes are comprised of minority students who benefit from this program.

The Staff

Dauber, a teacher in New York's public school system for 13 years, developed this program, although she readily admits that "task cards are hardly a unique idea." There are presently three teachers involved with the program in her school, in a flexible and supportive team-teaching approach. Dauber has no volunteer or paraprofessional support, and she says, "You don't even have to be in the room." Dauber's principal is educationally and personally supportive, believing that a strong program is any which the teacher enjoys and the students like—and which works.

Materials and Facilities

Task cards have to be constructed by hand, a process which can be added to over many years. A teacher can start with one workbook series, cutting out pages and pasting them on cardboard cards. The cards should be covered with plastic paper to avoid destruction, a distinct advantage over workbooks. Dauber has added to her collection over the years and stores extra cards at her house when they are not in use.

Outside Resources

There are no particular outside resources needed in this program. However, many of the cards are "enrichment" cards and can be tied in with class trips, projects or special books.

Overall Value

Dauber maintains that task cards ultimately make teaching easier for the teacher, more enjoyable and satisfying for the students without stinting on lesson content. "Task cards," Dauber says, "build confidence and willingness to work in students. Cards become a game. The children work together. And, I find I return again and again to cards they did not complete perfectly until they get them right." Furthermore, Dauber says that cards are not threatening the way workbooks can be. Also, many different workbook series that can be used as cards are accumulated, and they can be used over and over again. "Record-keeping is minimized," she adds, "and, generally, my job stays easy, enabling me to maintain a joyful classroom."

More Information

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Principal: Dr. Winston Robins

Elementary School Reading

Grades 3 through 6

The Experience of Language

The Program

This is a program that seeks to give children a love of language—both the written word and the spoken word—through poetry and song. Material is selected on the basis of simplicity of style and significant, humanistic content. Poems by William Wordsworth and Emily Dickinson as well as limericks and folk songs are examples of works used to motivate students to develop word power and an appreciation for poetry and songs. This, in turn, results in heightened interest in readings of all kinds. Program originator Dorothy Donovan begins by reading poetry to the class. Then she teaches them simple poems. Songs are taught in the same manner. Rote methods are used until there is a grasp of the material. As students learn language skills, they are encouraged to write their own poetry. Students illustrate poems and songs and the illustrations are exhibited in the school. Also, many choose to recite poems over the school's public address system. Reading and speaking aloud good poetry, and singing simple songs, expose the children to new words and complete sentences and is a new experience for the great majority. Says Donovan: "I want the children to enjoy the experience, the magic, of language."

The Students

The program is usually a once-a-week experience but may meet more frequently depending on the students, the structure of the school and the discretionary tastes of the individual teacher. Donovan welcomes inquiries.

The Staff

Donovan has been teaching for 20 years. The program, which she created and implemented, evolved from her love of poetry and her desire to communicate and share this with her students. She credits the School Improvement Division staff for suggesting and supporting the development of this program.

Materials and Facilities

Let's Read Together is a good resource book. Song books containing choral parts are also recommended. In addition to song books and poetry books, art supplies (oak tag, construction paper, crayons, magic markers, paints and painting paper) and rexograph paper are utilized.

Outside Resources

There are field trips to other schools in the district and to a nearby convalescent home, where students read poetry. As Donovan notes, "There are numerous opportunities for sharing." Auditorium performances, classroom presentations for parents and students, visits to community organizations are among the group experiences. Students are naturally motivated to attend their local libraries to find new material.

Overall Value

"Because of this program," says Donovan, "there is a marked up-grading of the student's self-image and pride in accomplishment, which not only adds to a sense of worth but becomes a meaningful sharing and experience of themselves with others."

More Information

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New York, NY 10028

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Principal: Dr. Madeline Richardson

Grades 1 through 6

Student Wide News Reporting (SWNR)

The Program

This is a motivational program good for any number of students. For a full week, two students (usually a boy and a girl) play "radio" anchor people. They introduce themselves over the public address system—known as "our broadcasting station," SWNR, or Student Wide News Reporting—giving date, time, weather report, the day's menu, book reports, movie and TV reviews, current events, special school and community activities and events, and citations for individual students. They also deliver announcements from the principal and introduce "guests," who tell stories or recite poems. "Everyone gets news to us," says program originator Rosa Chapman DuCree. During the day, the class compiles information, while the two anchor people write a news script (except for last-minute weather report) for the following morning. For students in other classes interested in practicing news writing and reporting, DuCree also conducts a Friday Broadcasting Club.

The Students

One fourth-grade class of about 30 is directly involved in the program for at least 15 minutes each morning. In addition, 20 additional students from the first through the fifth grades participate in the Friday Broadcasting Club which starts in March. The students, mainly black and Hispanic, include all achievement levels.

The Staff

The program was developed in 1974 by Rosa DuCree, a regular classroom teacher. "We started with a lesson on news reporting and simulated a radio broadcast using a fake mike. Then I thought: What would happen if we used a real mike?" With the full support of her principal and the cooperation of her colleagues, DuCree's class reports the news of the day to the entire school.

Materials and Facilities

A tape recorder is needed for practice work, a radio to receive city-wide news and weather reports and, of course, a school public address system for "broadcasting." Other materials include plenty of paper and pencils and, possibly, a record player.

Outside Resources

Any field trip (for example, to the public library, the zoo, or the New York Aquarium) can be written up and reported as news. So can newspaper and magazine articles on science or current events. It's also a good idea to visit professional radio and television stations periodically.

Overall Value

If students aren't learning, there's a reason. Because this program stresses many skills—reading, listening, speaking, writing, as well as research and working together—it helps youngsters learn. They become interested in what goes on around them. They express themselves and articulate opinions. In the process, they develop good self-images. "Once you ask children what they think and put them in front of a public address system, something magical happens. They realize their information and opinions are important and they take an active role in things going on around them. Children want people to listen to them."

More Information

Rosa Chapman DuCree
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Brooklyn, NY 11233

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Principal: Albert Kisseloff

Elementary School Communication Arts

Grades 1 through 6

Creative Expression

The Program

The program deals with six areas of communications: public speaking, oral interpretation of poetry, drama, music, story telling and creative writing. The thrust of the program is to build confidence. Students are shown different ways of expressing themselves so that they can be more in touch with their own feelings and aware of those of others. Joyce Greenleaf, the program's developer, introduces each area and explores it in depth with the children. "I feel that within the six areas there is at least one, probably more, that each student will be good at." Once they are familiar with the material, they are ready to perform as individuals. "They love dialogue," says Greenleaf. "And they don't ever forget those moments on stage, when they've been a star."

The Students

About 600 multi-ethnic students, of different achievement levels, participate in this program. They form 15 classes ranging from the first through the sixth grade. Particular attention is given to the fourth, fifth and sixth grades, which meet for Creative Expression twice a week for a 90-minute period.

The Staff

Greenleaf is encouraged to initiate new ideas. She has put on musical/dramatic productions in school for the last 13 years, and also leads the school glee club, which has performed at senior citizen centers and at the Rockefeller Center Spring Festival. Last year, students in the program put on an original play based on *The Me Nobody Knows*, consisting of dramatic expressions of children's feelings, with music to fit the mood. Three of these students auditioned and have been selected for the first All-Children's Theatre. Greenleaf has added a drama club to her program, and has the support of both administrators and staff, in particular the bilingual teachers.

Materials and Facilities

Duplicating materials are essential as are a cassette tape recorder, a record player, records, plays, stories and poetry from the school library. Greenleaf likes to use "message songs" such as "Richard Cory" and "Little Boy Blue," and Langston Hughes' poetry. All these contain dramatic elements of humor that mean something to children. She notes that the material should enthuse the teacher, and be of excellent quality to keep students' interest. Other materials include language arts activity cards from the UFT teachers' store in New York City.

Outside Resources

The Library of the Performing Arts at Lincoln Center is an excellent resource for records, plays and books. So are the teaching college bookstores and the teachers' store. Magazines can be useful and, of course, field trips to shows and plays.

Overall Value

Through this program, children experience tremendous improvement in self-confidence. They discover hidden talents, new interests and new things to do. "I don't think anything is more important than that," says Greenleaf. "Their imagination is continually stretched. Above all it's a program that can't fail. There's always some area that a child likes and is good at."

More Information

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New York, NY 10032

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Principal: Gilbert Musinger

Elementary School Reading

Grades 3 and 4

Reading Diagnostic Program

The Program

This is a program designed to develop language ability, reading comprehension and social presence by using puppetry to improve reading and auditory skills. Students listen to a story that has been recorded on tape. Then they listen to a summary of the story by the teacher, followed by directions (again, by the teacher) for beginning an in-depth discussion based on the story's theme, plot and characters. Students then create puppets based on characters in the story and write summaries of the story, new characters and alternate endings. Students finally stage a play for their classmates and other children based on their puppet characters. During this process, which includes diagnosing individual areas of difficulty, the teacher is continually improving the children's sight vocabulary, listening skills, ability to follow written and oral instructions, social maturity, oral language skills and social and cultural awareness.

The Students

These are third- and fourth-grade students, meeting in groups of eight to 10 twice a week, for 45-minute periods. They are at least one-and-a-half years behind in reading skills. This program may be extended to children below third grade and above fourth grade. The groups are small, with less than 20 students in a class. If the students are particularly slow, the program can be adjusted.

The Staff

Lenore Krohn, a teacher with 12 years' experience, developed this program two years ago. One teacher can duplicate the program, although a paraprofessional educational assistant would be helpful. Administrative support is essential in terms of acquiring materials, personnel and space.

Materials and Facilities

The prime requirement is a cassette tape recorder. Blank tapes are needed for recording, and four headsets and a jack box are needed for group listening. Puppet making requires styrofoam balls, felt, eyelets, scissors, glue, magic markers and "found" objects. Also, ready-made animal puppets can be used.

Outside Resources

None are actually needed, but the class could derive a good deal of inspiration (as well as fun) from a visit to a puppet or children's theatre, including a backstage tour. The basic resource material is the *Troll Library of Fairy Tales* (Troll Associates), but other stories may do if children are able to adapt them without undue difficulties.

Overall Value

Teaching students to make simple puppets alone forces them to work towards a goal that has almost immediately tangible results. Since the student functions as both puppeteer and story teller, he has increased motivation to learn to read, follow directions and listen to the story. Krohn observes, "The puppet may serve as a device to hide behind, but this is good. The puppet may fail, but not the puppeteer. In this way, the student will less likely be devastated by failure." When they are called upon to perform, the situation is non-threatening, just another class. The device of using puppetry gives the teacher a wealth of material with which to make a graph of each student's development. Krohn finds that reading skills, self-image and citizenship greatly improve as the course progresses. In the long run, the student cares more about his or her appearance, the class and the school.

More Information

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RDP P.S. 136
Mini-District 29
11436 202nd Street
St. Albans, NY 11423

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Principal: Sydney Guss

Elementary School Reading, Math, Science, and Social Studies

Grades 3 through 6

Developing Learning Centers in the Gifted/Talented Classes

The Program

In these Learning Centers, the teacher's role changes from teacher-in-charge to teacher as initiator, organizer, facilitator and resource person. The cognitive skills are taught and utilized by the students in various classroom environments while the teacher's role continuously evolves in the classroom. Initially, the classroom setting is fairly structured, while the teacher is introducing higher-level thinking skills and instructional procedures. Finally, the higher level thinking skills of analysis, synthesis and evaluation are integrated with the basic curriculum and/or extended curriculum based on the student's interests. This flexibility is one of the program's highlights.

The Students

Four classes, third through sixth grade, participate. They consist of about 100 gifted students, predominately Hispanics and blacks.

The Staff

Four teachers, in conjunction with curriculum coordinator Anna Leone, are currently implementing the Learning Center at P.S. 206M. They received their professional training through available graduate programs, Leadership Training Institutes conducted by The New York State Education Department, and at conferences conducted by the National/State Leadership Training Institute on the Gifted and Talented, Los Angeles, California. The school principal would like to make the school a teacher training center.

Materials and Facilities

The Learning Center requires movable furniture so that students can work in separate groups. The materials used depend on the types of centers that are set up. For example, a social studies center requires maps, an atlas, commercially and/or teacher-made rexographs and task cards. In general, regular school supplies plus materials students might bring are all that are required. The school library, of course, is always useful.

Outside Resources

The four participating classes have been visited by a film maker, a dancer, an origami artist, a musician and a photographer from the International Center of Photography. These visits have been made possible by District Office funds and school budget. Such community resources as the American Museum of Natural History, the Metropolitan Museum of Art and the Wave Hill Environmental Center have been used to enrich the curriculum. A selected bibliography includes:

Kaplan, Sandra. *Providing Programs for the Gifted and Talented.* Leadership Training Institute, Ventura, CA: Office of the Ventura County Superintendent of Schools.

Bloom, Benjamin. *A Taxonomy of Educational Objectives, Handbook I: Cognitive Domain.* New York: David McKay Co., Inc., 1956.

Overall Value

As a result of this program, some students have been accepted into the City's special schools (Hunter and Trinity), while most of them go into special progress classes in junior high schools. Their performance on standardized reading tests have improved, as have their attendance rates to above 90 percent. In addition, many other teachers are showing interest in the Learning Centers' approach to instruction.

More Information

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Principal: Juana M. Dainis

Elementary School Reading in Subject Areas

Grade 6

Newspapers as Textbooks

The Program

The Newspapers as Textbooks program consists of students purchasing, reading and discussing a given newspaper (*Newsday, New York Post*, or *The Daily News*). As soon as the bundle of newspapers arrives at the school, teacher Edward Levine, the originator of the program, skims a copy for specific items of interest. He then writes a number of questions on the blackboard relating to up to 20 articles, advertisements, features, weather, obituaries and television schedules. The questions are of different types: factual; main idea; inference (What do you think? What might happen next?); vocabulary (Find 10 words that end in "ing"); consumer education (Cut out coupons relating to things your parents might buy; Compare two advertisements); long-range assignments (Clip articles on the same subject); reading weather charts or television schedules. The students copy the questions and work on them in class as well as at home. At the next meeting, they discuss their answers. "By and by, the work gets easier, and they all perceive this," says Levine. "But at the same time, I make the questions progressively harder."

The Students

The participants are three sixth-grade classes, or about 90 students from mixed backgrounds. One class is slightly above average, the second average, the third well below reading level. They meet twice a week for one period and occasionally for a double period of langauge arts and reading.

The Staff

Levine, an English teacher for seven years, implements his program without assistance. He calls it a "system" rather than a program because "it's independent of the person administering it. Anyone can do it."

Materials and Facilities

A chalkboard and chalk.

Outside Resources

A bundle of newspapers must be delivered to the school daily. Each student pays for a copy and is consequently more careful with it.

Overall Value

"Youngsters can expect to advance at least a solid year in reading," says Levine. "This program has helped many of them go on to high school. The system is a very efficient and painless way to teach reading skills. In addition, it's different and always fresh because it relates directly to students' lives, environment and what's in the news. It makes them aware of current events, politics, people, places and consumer issues, and stimulates lively discussion as well."

More Information

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New York, NY 10039

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Principal: Lionel McMurren

Elementary and Junior High School Speech Improvement

Grades 1 through 9

Receptive and Expressive Language Delay

The Program

Designed for those with a learning disability in the area of auditory discrimination, the program's objective is to enable children to discriminate and categorize words that have the same consonants or vowels. The methods used incorporate evaluation, remediation and motivation. The teachers use three-by-three cards with pictures of objects (e.g., cake, gate, chain) which the students have to name. The pictures also represent sounds such as "a" or "e". Thus, students match pictures with corresponding words, and words with the same sound. After developing a given sound, they move on to rhyming words.

The Students

The participants are language-impaired elementary and junior high school students with articulation and reception problems. They meet with the teacher in small groups of up to four students once a week for 30 minutes. The program can also be used with children of normal intelligence whose area of disfunction is auditory.

The Staff

Helen Lumerman, a teacher of speech improvement, developed this program which she implements in four different schools. At the beginning of each term, Lumerman goes into each special education class to determine which students need extra help. She makes her decisions on the basis of special activities which she sets up, as well as teacher recommendations and student records. Lumerman works alone, but she has administrative support.

Materials and Facilities

Any room with a small table and a few chairs is good. Necessary materials consist of pictures of objects and actions. Lumerman traces and colors her own. She also makes alphabet sticks consisting of tongue depressors with letter cards glued on.

Outside Resources

None.

Overall Value

Auditory discrimination problems prevent students from learning certain word-attack skills. "With this program," says Lumerman, "children can be helped to read better. It works. They enjoy it and their own success is the motivating factor."

More Information

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Bureau for Speech Improvement - District 11 Bronx
110 Livingston Street
Brooklyn, NY 11201

Telephone: 328-3351

Director of Speech Improvement: Dr. John E. Lens

Elementary School Language Arts

Grades 1 and 2

Wings on Writing (Wow)

The Program

The developers of Wings on Writing feel strongly that, too often, writing skills are not stressed as the fundamentals of reading are taught. The teachers believe that the two should not be separated and that, in fact, each can be helped by the other. The program is very basic—for first and second graders—and the children begin the two-year program in the first grade with learning-to-read pictures. These rebus charts are displayed around the classroom, and the students quickly develop classroom lists of words with accompanying pictures. The students begin immediately to structure sentences and hunt for the words they need from the wall charts. The curriculum is basically interdisciplinary, and the program relies on writing, so that this skill is continually reinforced in all aspects of their school life. In the second grade, letter writing, notebooks, and proper grammar rules and skills are allied with creative expression. The students are encouraged to read their work or display it so that if the work is illegible, it is their fellow students who actively criticize and suggest changes.

The Students

First and second graders in two heterogeneously grouped, self-contained classrooms participate in this creatively intense writing program. Some of the multi-ethnic students are without any kindergarten experiences and some have weak second-grade skills.

The Staff

Beverly Pollock and Barbara Miller, two experienced teachers, developed this program together in 1974. They have no paraprofessional help or volunteer aid, but they do draw heavily on parent support. "We actively solicit their participation and ask them to help," the program originators comment. "We also receive a great deal of administrative support from our principal, who not only endorses the program but also allows the walls of the classrooms to be literally plastered with the necessary pictures and charts." Pollock and Miller are available to other teachers who might be interested in the program, and urge a visit to their school to see the charts and understand the procedure.

Materials and Facilities

The program is conducted in two self-contained classrooms with a lot of useable wall space. The teachers work developmentally and sequentially with one another, but individual teachers certainly could conduct the same program. No materials other than regular classroom supplies are needed.

Outside Resources

All experiences, either in the classroom or outside, are potential sources for language charts. For instance, the first-grade curriculum in social studies may be the students' own environment. Trips, cooking experiences and crafts projects may take place. Then, appropriate vocabulary is discussed and entered on charts with accompanying pictures which become the spelling resource that permits written expression.

Overall Value

Written skills of students tend to be very poor. Furthermore, new communication skills often de-emphasize writing so that even tests are taken by filling in blanks, not by writing. Wings on Writing strives to counteract this by encouraging written fluency from the onset of school. The students experience fewer frustrations because they can seek and find the words they need for communication. "Writing is a second language that develops best with early and frequent use," says Miller. "That is the advantage we are trying to give these children."

More Information

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Springfield Gardens, NY 11413

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Principal: Dorothy Moore

Elementary School Language Arts

Grades 4 and 6

Interdisciplinary Reading

The Program

The purpose of the program is to teach students reading skills which simultaneously involves them in a work of literature. Program originator William Munson's class studies one book, *Watership Down*, in depth, relating the story to history, science, math and art. Assignments are given on each part of the book that stimulate thinking in these areas. Students discuss the concepts of leadership, decision-making and political systems, posing such questions as, "If you have everything done for you, what do you lose?" They also talk about various plants and descriptions of the English countryside and translate word images into colored drawings. They study vocabulary words such as genocide and suicide, and make story boards to illustrate developments from chapter to chapter.

The Students

Two classes, a fourth and a sixth grade, participate in this program for three hours a week over four to five months. The students (approximately 32 per class) are of mixed background and above-average achievement levels. The program, however, has also been used with below-average readers.

The Staff

Munson developed this program while teaching the sixth grade. Now, the same method is used in a fourth-grade class. The principal is totally supportive. So is the Parents Association, which bought the 40 copies of *Watership Down* that Munson has been using for four years, and as many copies of *The Wind and the Willow* for the other class.

Materials and Facilities

Very little is needed beyond the book itself. Munson has prepared a style guide with a glossary, as well as a set of questions to direct the student before, during and after reading.

Outside Resources

Exposure to gardens may be necessary, as the class has done some work with flowers. They have also studied rabbits, for which two other books are useful: Lockley's *Private Life of the Rabbit*, and Felix Salton's *Thirteen Rabbits*.

Overall Value

Literature is more than a story. Most children's books become only narrative when read without guidance. Students have to be shown the fact that an author has a point of view, likes and dislikes, and a lesson to teach us. "The major success of the program," says Munson, "has been our ability to introduce, discuss and develop ideas that do not normally come from the usual children's reading assignments."

More Information

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New York, NY 10028

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Principal: Edmund Fried

Elementary School Language Arts

Grades K and 1

Storytelling on Flannel Board

The Program

The Storytelling program is a way of acquainting young children with part of their literary heritage. It uses a flannel board and a collection of seasonal and holiday stories, Mother Goose rhymes, Aesop's fables and fairy tales to help children visually relate to characters with which they may be unfamiliar: king, queen, elf, fairy, gnome, witch, giant, pilgrim, goblin. The program is part of the weekly library period for the kindergarten and first grade, and some stories may also be appropriate for presentation to higher grades. A story a week is presented on the flannel board. The stories come from three books which have outliine drawings for tracing and the wording to accompany figures and characters.

The Students

Two hundred and fifty students participated in these flannel board Storytelling sessions during the 1978-79 school year. The students are on or above grade level.

The Staff

The program was developed by Carroll Nugent, a licensed librarian. The tracing, coloring, backing and cutting out of the figures for the approximately 90 stories was done by Nugent. However, aides could do this preparation just as well. Each story was packaged in an 8-by-10-inch envelope along with five-by-eight-inch cards on which was typed the story or rhyme.

Materials and Facilities

Materials needed include five-by-eight index cards, 8-by-10 and 10-by-13 envelopes, carbon paper, manila oaktag, felt tip markers in all colors, a 26-by-38-inch flannel board, tracing paper and clear contact and flocked contact paper.

Outside Resources

The three basic books are: *Storytelling with the Flannel Board, Book I* and *Book II*, by Paul Anderson (T.S. Denison & Co., 1963), and *Flannel Board Fun Games Stories Song* by Jeanne M. Machado (Prentice Hall, 1975). Stories from other sources may lend themselves to presentation on the flannel board, and the line drawings in the three cited books will serve many different stories. A selected bibliography includes:

McGuire, Mabelle. *Finger and Action Rhymes.* Dansville, NY: The Instructor Publications, Inc., 1959.

Mason, Margaret. (ed.) *Holiday Stories.* Dansville, NY: The Instructor Publications, Inc., 1972.

Overall Value

A pleasurable library experience for young children is possible with this program. The reinforcement of literary terms and a wealth of stories, rhymes and literary allusions soon become part of the child's frame of reference. Once copied and packaged, the stories can be used for years to come with no additional preparation on the teacher's part. Their use is, of course, not limited to a library setting.

More Information

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Staten Island, NY 10314

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Principal: William Schorkopf

Elementary School Reading

Grade K and 1, Remedial

Organic Reading

The Program

Organic reading, or the building of sight vocabulary through the students' own chosen words, is meant as a part of a regular, multi-faceted beginning reading program. It is based on the notion that students learn more quickly, and without academic resistance, when they are given words they need and want to know. In the beginning of the school year, program originator Audrey Ramm gives each student one new word a day which she writes on a flash card for their "word books." The students master this word and receive a new one the following day. The word books fill up quickly, and lessons take on a light and relaxed tone. Gradually, students are given two or three words a day. These words come from their own choices, as well as from experiential group stories and/or basal words. Once a week the students work in pairs, checking each other's memory of their individual word books. They also write sentences and stories in connection with their words.

The Students

This program is basically designed for beginning readers with or without remedial problems. In years past, the teacher has had 32 students in her second grade classes, but last year she had 20 transitional students, all of whom were showing academic problems. The program is also appropriate for bilingual students.

The Staff

Ramm developed this program 13 years ago, having read Sylvia Ashton-Warner's books. Ramm has a masters in early childhood education, but she maintains that no special training in reading is necessary. Although the program is more easily handled with paraprofessional or tutorial help (Ramm has had both in previous years), neither is essential. Ramm receives philosophical support from her principal for the program; direct administrative help is not needed.

Materials and Facilities

Regular classroom materials can be used, although it is helpful to buy commercially made, blank flash cards. A black crayon is recommended for writing the students' words, and paper fasteners or metal rings are needed to clip together the flash cards.

Outside Resources

Ramm suggests that teachers interested in starting the program read Ashton-Warner's *Spinister* (New York: Bantam Books, 1961) and/or *Teacher* (New York: Simon and Schuster, 1963), two books in which she describes the philosophy and methodology involved in the original organic reading program.

Overall Value

Ramm feels strongly that children can approach reading with greater ease and pleasure if the first learning experiences are drawn from their own world. The program offers instant success when a student is able to read a word, any word, because he or she has chosen to do so. The program also allows for creative teaching because the teacher is able to integrate the program into other reading programs. Ramm, for instance, integrates organic reading into her language experience, linguistic, phonics and basal approaches.

More Information

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New York, NY 10009

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Principal: Lydia de Alvarez

Elementary School Reading Program

Grades 2 through 6

Reading Power

The Program

Reading Power is a reading program tailored to the particular needs of the modern city student and to the realities of the self-contained classroom. Program originator Andrew Rose has built upon the traditional skills approach to the teaching of reading as embodied in the Board of Education's publication, *Sequential Levels of Reading Skills, Pre-K—12* (published many years ago and still available). He has written a teacher's manual that shows how to adapt the New York City guide to the current generation of youngsters. It offers humor and concrete analogies to facilitate the learning of four basic comprehension and competency skills. Included in his manual are:

(1) suggestions on how to use the Board's guide and how to motivate reluctant and non-readers;
(2) standardized test questions and phraseology classified to reveal which wordings are intended to test which skills;
(3) thirteen original reading test lessons, diagnostically structured;
(4) a separate section on vocabulary development, with six word-knowledge test lessons; and
(5) a bibliography that covers scope and sequence, teaching strategy, test preparation and interpretation, methods of reading instruction, aids in preparing teacher-made reading selections, and commercial materials.

The Students

Almost 100 students at P.S. 20 in Manhattan participate in this skills-oriented reading program. The school reflects the ethnic diversity of its Lower East Side location. Students come from second through sixth grade classes and all have either disciplinary or remedial problems. They attend Rose's reading laboratory during regular school hours.

The Staff

Rose, a teacher for over 10 years, developed this program while he was working in self-contained classes. He is now a cluster teacher working with students who have reading difficulties. He has no paraprofessional or volunteer help but has received support from his principal, superintendent, and colleagues. Rose is fond of using students as peer tutors, though he emphasizes independent study. He gives workshops to teachers interested in his approach, and his manual is avaliable at those sessions.

Materials and Facilities

Rose notes that no special funds are needed to implement this program since the essence is "in the approach." He does, however, recommend the use of New York State Textbook Law money to purchase Barnell-Loft specific and multiple reading skills series. Even without such commercial materials, his ideas can be implemented by acquiring the Board of Education's *Sequential Levels* guide and his own manual, *Snag the Test!*

Outside Resources

None are required.

Overall Value

"Provided with enough language experience and basic skills, our children do succeed in reading," Rose claims. "They can be turned on to sharing the ideas, feelings, adventures and fantasies of great authors and poets." Rose also argues that reading should be taught via specific skills and that the New York City publication outlines the sequence "brilliantly." A key benefit of his skills approach is that it explains and elaborates a direct link with test-taking skills.

More Information

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New York, NY 10002

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Principal: Dr. Leonard Golubchick

Elementary School Reading/Language Arts

Grades K through 8

All Around the Alphabet

The Program

All Around the Alphabet is an approach to reading readiness and language development that uses the alphabet as a tool to increase phonic awareness. The phonetic sound of each letter is stressed by the creation of alliterative sentences. The foundation of the program is a "Trip Through Alphabetland," an imaginary land made up of 26 countries. Each country, representing a letter of the alphabet, is defined and structured by objects and activities that begin with its respective letter and sound. For example, in B-Land, one can travel only by bicycle, boat or barge; eat bananas, beans, bread and barley; and do things such as blow big blue balloons, bounce baseballs and bandage broken Barbie dolls. A total exploration of sound is stimulated through classroom discussion, and all the words beginning with the sound being studied are listed on an experience chart. The objective is the creation of alliterative sentences. Each student writes and illustrates his own alliterative sentence on a rexograph form designed by program originator Sheila Rothgart. The pages are collected into class books for all to share.

The Students

This program has been used successfully with elementary school students of all ages and socio-economic backgrounds. It provides readiness skills for non-readers by strengthening auditory discrimination skills and the awareness of initial sounds. It is a challenging language development and writing experience for the more verbal and sophisticated older students.

The Staff

The program was developed by Rothgart in 1970. Paraprofessional or volunteer help is not essential, although with younger children a student-teacher or additional adult facilitates the recording of the sentences. A supportive administration is essential for the implementation of a non-traditional reading program as well as for providing supplies.

Materials and Facilities

The program is easily implemented in a self-contained classroom. Dictionaries and alphabet books provide an initial resource for the children to find appropriate words and pictures for the sound being studied. As the sentences are often "tongue twisters," the use of a tape recorder emphasizes and reinforces the sound by allowing the children to listen to the musical and repetitive quality of their alliterative sentences. Magic markers and enough paper to produce a 26-page book for each child are also needed.

Outside Resources

None are needed.

Overall Value

This curriculum introduces students to language and reading through a non-traditional creative approach. There are no absolutes or rigid criteria for success or failure. Nonsense sentences are as much a part of the fun as the alliterative flow of the words themselves. By introducing words and sounds in a playful way, language flows freely, and each child participates in the creation of his own reader. The program provides readiness skills for the non-readers and at the same time is a challenging language and writing experience for older, more sophisticated age groups. Children, free to take risks, are able to experience their own self-worth and creative potential. With this foundation and approach to learning, motivation for further growth and development is built into the educational process.

More Information

Sheila Rothgart
P.S. 3 Annex—Independence Plaza School
334 Greenwich Street
New York, NY 10013

Telephone: 233-6034

Principal: Mary C. Tighe

Elementary School Remedial Reading

Grades 1 through 5

Reading, Writing and Eating

The Program

In the Reading, Writing and Eating program, students who require special reading help receive instruction conforming to the regular reading program centered on the preparation, cooking and tasting of foods. Reading skills that are reinforced in this "reading through the senses" approach include following directions, increasing the working vocabulary, paragraph comprehension, sequencing and memorization. All recipes are related to the lessons in reading, which in turn contain references to food, festivals and fantasy. During the fall, the lessons relate to foods of the harvest like applesauce, pumpkin pie, gingerbread. In December, the children make non-edible holiday ornaments as well as cookies. In the spring, popcorn, peanut butter cookies and Russian Easter bread are prepared. Post tests show that significant numbers of youngsters are able to return to regular grade-level activities and no longer need help after having been through this program.

The Students

Students in the first through fifth grades needing remedial reading as determined by their teachers and citywide test results are taught in groups of 10. Most of the students, in addition to having reading problems, are considered hyperactive and require considerable individual attention.

The Staff

Ann Marie Sessa, reading specialist in District 29, and education assistant Marion Bennett, comprise the staff of this program. Sessa has been a teacher for 15 years and has a Common Branches license. She has completed many courses in reading instruction. Bennett is a resident of the community and has been part of the program for several years.

Materials and Facilities

Sessa says that the ideal set-up includes cooking equipment such as an electric frying pan, a small electric oven, cookie sheets, a mixer and simple cookbooks. Also, grocery products such as flour, sugar, spices and other natural food ingredients are necessary, although Sessa has always been hampered by a "bare-cupboard" budget. A regular classroom which has enough space to separate reading and cooking activities is adequate.

Outside Resources

None are used, although walks through the neighborhood supermarket are encouraged, and group shopping expeditions can be both instructive and enjoyable.

Overall Value

"This program increases motivation, improves reading skills and, of course, creates an atmosphere of fun in which to learn," Sessa says. "The kids seem to attend their reading class with great enthusiasm and regularity. Absenteeism is down to a minimum. Clearly, the proof of the pudding is in the reading."

More Information

Ann Marie Sessa
P.S. 136 Mini School
Reading Diagnostic Program Center
114-36 202nd Street
Queens, NY

Telephone: 465-6850

Principal: Albert Fox

Elementary School Reading

Grades 2 and 3

Mastery Reading Program

The Program

The Mastery Reading Program is an individualized, self-instructional program which uses a variety of materials to fit the level and learning style of each student. The teacher diagnoses the level of each student through simple criterion-reference tests and personal judgment. The teacher then prescribes, with student cooperation, a variety of both teacher-made and commercially available materials for purposes of skill development and improvement. Progress charts are kept by each student as well as by the teacher. Reading for pleasure is possible through a large supply of class, school and public library books, and is encouraged by a reward system. As part of the curriculum design, tasks are sequenced in small, achievable steps. Students function at their own level and pace through a variety of learning materials and individualized instruction. Initiative and responsibility are enhanced through this program's self-instruction and self-direction. Natalie Thompson, the program's originator, suggests that teachers attend her class for a better overall picture. Material is available for replication, but Thompson prefers that the program be seen in order to assess its significance and application.

The Students

The class is composed of students with mixed ethnic backgrounds including Polish, Italian and Hispanic. There are 32 students in each class representing all levels of achievement. Each class meets every day for one period.

The Staff

Thompson has been teaching for 14 years. She was the recipient of a mini-grant from the New York State Department of Education for a project titled "Individualized Instruction in General Education." The Mastery Reading Program can be comfortably run by one teacher per class.

Materials and Facilities

The program is inspired by Benjamin Bloom's *Human Characteristics and School Learning.* Science Research Associates (SRA) kits are recommended, as are "Read Along" audio cassettes, books and crossword puzzles (with the answers pasted on the back). Materials needed include workbook pages, plastic page protectors and grease pencils, paper for answer sheets and progress charts, large envelopes for student work, paper stars and other rewards and standardized tests for pre- and post-evaluation. *The Gates-MacGinitie Standardized Reading Test* for Grade 2 in Vocabulary and Comprehension, Forms 1 and 2, is used. Thompson also suggests using incomplete SRA kits and to look in book closets for incomplete sets of old workbooks and old texts when there is little or no funding.

Outside Resources

None are needed.

Overall Value

The program gives students fundamental comprehension and vocabulary skills and seeks to instill a love for reading and education in each student. Because book reports are an ongoing assignment, parental help is encouraged, and this task directly involves parents in the education of their child. The pupils in the program have shown a marked improvement in reading scores, as measured by standardized pre- and post-tests.

More Information

Natalie Thompson
P.S. 97Q, District 27
85-52 85th Street
Queens, NY 11421

Telephone: 849-4870

Principal: Marvin Schwartz

Elementary School Phonics, Nutrition, Quantitative Skills

Grade 1

From Apples to Zucchini

The Program

The Apples to Zucchini program has several purposes. Students become familiar with different foods and learn to recognize them by their initial consonant or vowel sounds. They become alert to advertising claims about foods, develop concepts of quantity and quality, and learn food-sharing habits. For example, the teacher brings apples for the students to share. They discuss their taste, color, size, number and begin preparation of a food dictionary, starting with "A" for apples through "Z" for zucchini. Parents are encouraged to contribute sample foods and recipes. One of the games played consists of writing letters of the alphabet on the blackboard. A magnetic disk is placed next to the letter, and a student then pulls out an imaginary food and "eats" it, while the class guesses what it is. "Puppets" made from vegetables also enhance the program.

The Students

About 30 first graders of average ability participate in this program during their snack time. They are a mixed group which also includes several non-English speakers. The program can be expanded from a 10- to 20-minute snack time into regular instruction periods, and is suitable for both younger and older children.

The Staff

Nina Wasserman, a regular classroom and creative arts teacher, developed this program with the support of her principal and the help of one paraprofessional and parents. She now assists first and second grade and health conservation teachers in implementing it in their classrooms.

Materials and Facilities

A regular blackboard, chalk, writing and drawing materials are needed, in addition to paper plates, napkins, cups and a safety knife.

Outside Resources

Different foods, mainly fresh fruits and vegetables, are required. These come from parents as direct food or through money contributions amounting to $2 a month per child. Parents can also supply recipes and even such dishes as fried zucchini or baked ziti. A bibliography can be obtained from the Nutrition Education Resources Project, Nutrition Program, Box 188, Teachers College, Columbia University, New York, NY 10027 (telephone: 678-3955). In addition, Wasserman has an A to Z picture dictionary that is useful.

Overall Value

Children derive enormous pleasure from this program, in addition to good eating and sharing habits and information on nutrition. Properly implemented, the program can also develop reading, writing and counting skills, as well as aesthetic perceptions.

More Information

Nina Wasserman
P.S. 131K
4305 Fort Hamilton Parkway
Brooklyn, NY 11219

Telephone: 330-9355/9356

Principal: Louis Staiano

Elementary School

Grade 3

Memory Development

The Program

This program focuses on developing children's sequential memory and attention skills so that learning in all subject areas can be improved, enabling students to function on grade level or above. The program lends itself to a variety of materials and games involving many auditory, visual, motor, verbal and tactile skills. These varied activities help improve the child's long- and short-term memory. Several examples explain the program. One lesson involves a "trip" to a department store in which students read the story of the trip and see a map of the store projected on a screen. They then must recall how to get to a specific department and how to get out of the store. The same methods apply to lessons about safety instructions in which students view flash cards and then describe what they have to do. A truly practical lesson involves making emergency phone calls; students must remember various emergency numbers, as well as their own phone numbers and addresses, and learn how to report an emergency. In another exercise, the teacher photographs the students on a specific day, and later asks them to remember the day, the people included in each photograph and what happened. Other lessons help improve the recall of factual information in specific subject areas.

The Students

The participants in the program are 36 second graders of average and below-average abilities from mixed ethnic backgrounds. Twelve students meet for small group instruction for 45-minute periods three times a week. The program is flexible, so that a teacher can use various parts of it in the course of the day.

The Staff

Majorie Wernick, an early childhood teacher, developed specific methods and lessons within this umbrella program. She has the administrative support she needs. "To do anything innovative such as change from daily routine," she says, "you must have the support of your principal." Wernick also has the help of a paraprofessional, although one teacher can implement this program on his or her own.

Materials and Facilities

Wernick uses duplicating materials, books, records, film strips, a projector and screen, different games, art materials, a 35mm camera, a cassette tape recorder, and a record player. The program can be made more or less elaborate than this, depending on the school's resources.

Outside Resources

The regular classroom teacher can take the students on field trips while incorporating memory skill methods into these trips. There is a large variety of possible projects, and copies of sample lessons can be made available for teachers wishing to replicate it.

Overall Value

Students enjoy this memory-expanding program tremendously because of the game-like atmosphere. They also develop a better self-image. "When self-image is improved," says Wernick, "children improve, because they know they *can* improve."

More Information

Majorie Wernick
P.S. 220Q (City-Wide Umbrella Bureau Program)
62-10 108th Street
Forest Hills, NY 11375

Telephone: 592-3030 and 592-3400

Principal: Marcia Knoll

Elementary School Reading

Grade 2

Learning Disabilities

The Program

This Learning Disabilities program is an approach to reading that deals with each student's perceptual preference. Some students, for example, have an auditory perceptual problem and can therefore use a visual approach to reading instruction. At the same time, the teacher can set up special materials such as headsets and tape recorders to help correct students' auditory problems. The thrust of the program is to work with the students' perceptual strengths, but the teacher has the option to help overcome perceptual weaknesses with special materials and activities. Program originator Roberta Wheeler is prepared to instruct other teachers in giving tests that determine students' principal strengths and weaknesses. The program can be used by any teacher and adapted to both problem and non-problem students. Wheeler has contributed her preparation periods to test students in other classrooms and to advise teachers on these students' perceptual strengths and weaknesses. Her principal has asked that all teachers with problem children use Wheeler's classroom as a resource.

The Students

Between 15 and 25 second graders with learning disabilities participate in this program. The multi-ethnic children are at least one or two years behind in reading.

The Staff

Classroom teacher Wheeler started the program seven years ago, when it was funded by the District Office. In spite of subsequent funding difficulties, principal Thomas Rooney kept the program. Wheeler also receives support from the assistant principal, the coordinator for childhood development and a full-time paraprofessional. Wheeler has been invited to be a guest lecturer at Queens College, and her program has been written up in *Reading Improvement* and *Kappa Delta Pi* magazines.

Materials and Facilities

Basal readers, a phonics text, a tape recorder and headphones are needed, as well as taped stories from books and a variety of games. These can be purchased or made by the teacher.

Outside Resources

Wheeler has a mini-grant for materials from the District Office. She also takes her class on field trips to such places as puppet shows, LaGuardia Airport, Flushing Meadows-Corona Park, Queens Botanical Garden, the Hayden Planetarium and the American Museum of Natural History. A selected bibliography includes:

McCarthy and McCarthy. *Learning Disabilities.* Boston: Allyn and Bacon, Inc., 1969.

Valett, Robert. *The Remediation of Learning Disabilities.* Palo Alto, CA: Fearon Publishers, 1967.

Frierson, E., and Barbe. *Educating Children with Learning Disabilities.* New York: Appleton-Century-Crofts, 1967.

Overall Value

With a large group of students, teaching methods and materials have to be varied so that individual needs can be met. This is especially necessary for those with learning problems, for their handicaps often prevent them from adapting to the teacher's method. Instead, the teacher has to adapt his or her methods to them.

More Information

Roberta Wheeler
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34-74 113th Street
Corona, NY 11368

Telephone: 429-5700

Principal: Thomas F. Rooney

Elementary School Program

Grades 3 through 6

Affect Development

The Program

The Affect Development program is a program designed to encourage self-awareness in students, nurture healthy interpersonal relationships and promote understanding of personal emotions. It is a relatively straightforward appendage to the regular curriculum. Program originator Steve Koretsky uses the DUSO kit (Development of Understanding of Self and Others) produced by the American Guidance Service. The kit includes puppets, tapes, cards and activities which encourage interpersonal discussion. The students work with the kit twice a week for a total of about one and a half hours. They role play, play with puppets and talk about issues which affect young children.

The Students

Koretsky has worked with multi-ethnic third through sixth graders on this program in a variety of settings. He has been a cluster teacher and roving guidance counselor as well as a classroom teacher. Koretsky has worked with students on every academic achievement level in the school and feels that the program is appropriate to any group.

The Staff

Koretsky first began the Affect Development program in 1977. He has been a teacher for 10 years, is presently involved in a doctorate program, and eventually wants to be a therapist. Koretsky feels that no formal background in psychology is necessary to replicate this program. He has no paraprofessional or volunteer support and his principal has given him a free hand to develop it as he wishes.

Materials and Facilities

The Development of Understanding of Self and Others material is necessary to proceed with this program. The kit is relatively expensive, but it is also durable. The teacher's manual in the kit is essential, as it presents activities sequentially. The kit also includes tapes of open-ended stories, puppets for role playing and oaktag games. Additional teacher-made materials can be developed and constructed to supplement the kit.

Outside Resources

There are elements of career guidance involved, and trips to meet some of the people described are an effective addition to the program. Koretsky recommends *American Psychologist*, a monthly publication of the American Psychological Association.

Overall Value

"I enjoy getting to know the students in this informal and personal way," says Koretsky. "Emotional development and security are important to successful learning. Although there are no quantitative means to determine the success of this program, it is a pleasant and enjoyable way to get at some of the personal issues affecting children." Koretsky is willing to talk to any teacher who might be interested in learning more about his program.

More Information

Steve Koretsky
P.S. 85
2400 Marion Avenue
Bronx, NY 10458

Telephone: 220-8315

Principal: Ruby Howell

Elementary School Science

Grade 4

Food for Thought

The Program

Food for Thought is an interdisciplinary, activity-oriented nutrition program with improved eating habits as its goal. Students, especially slow learners, need relevant and immediate material to motivate them, and program originator Louise Zaref feels strongly that few things are as captivating to the young child as the food he or she consumes. Food "works" as the basis for an interdisciplinary approach to basic skill development. Zaref first discusses the four food types. and the class develops activities around learning these: chart making, record keeping, table reading and general observation and categorization. Nutrients are then discussed; planting is done; and digestion is covered using models of the human body. All through the program, Zaref uses their developing scientific knowledge to stimulate projects in writing, drama, poetry and basic langauge arts. The potential for possible spin-offs is unlimited. Zaref constantly refines and expands the program. She has developed a sequence of activities as well as a bibliography of free materials suitable to the program.

The Students

Thirty fourth graders participated in the program during the 1978-79 school year. This class, of multi-ethnic students, was scoring below average on standardized tests. It was basically a remedial program, although the students were not in a transitional class. Food for Thought, however, has been tried with students performing on grade level. It takes four to five months, depending on the level of the students and the energy of the teacher. The students meet two to five times a week to work on the various projects.

The Staff

Zaref, who developed the program in 1977, has been a classroom teacher for 11 years. Although she has an intense interest in and concern for nutrition and children's eating habits, she has no special background in science and/or nutrition. She receives no paraprofessional or volunteer help in running the program. She receives encouragement from her principal but Zaref feels that such administrative help is not essential. But if a teacher wanted to expand the program using the school nurse and cooks, administrative aid would be important.

Materials and Facilities

Food for Thought, Zaref says, can be run using regular school materials. Ideally, though, one needs models of humans for study, a hot plate for cooking, a few chemicals for testing and soil for growing. There is also a book entitled *What Happens to a Hamburger?*, published by Thomas Crowell, which Zaref reports is superb for the unit on digestion. In addition, there are a few filmstrips which she recommends and which are listed in her bibliography, available on request. Numerous government publications are available free of charge.

Outside Resources

Zaref has not yet drawn on outside resources, but she plans to organize trips to local factories, bakeries, and other relevant businesses. She also anticipates working with the school cooks so that the students can study the subject from yet another perspective.

Overall Value

Students more readily understand certain scientific concepts when placed in a context that means something to them. Food is an instant success with the students. "It is rewarding," says Zaref, "to watch these students enthusiastically work with new ideas and skills. A teacher can also be as modest or as expansive as she or he desires with such a program."

More Information

Louise Zaref
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2400 Marion Avenue
Bronx, NY 10458

Telephone: 220-8316

Principal: Ruby Howell

Grade 5

Sound Slide Show

The Program

In the Sound Slide Show program, the students actually plan and make their own slide show. The class is divided into small groups; each group writes a script which may be fact or fiction, depending on the topic or story the teacher assigns. If it's a story, the script may contain dialogue as well as narration. The group plans the slides to illustrate the script and then clears them with the teacher. Each group is given a roll of color film and a camera and instructed in picture-taking techniques. The students spend one or two days taking pictures. They are urged to incorporate sound effects in their scripts, e.g., creaking doors, telephone rings, music and the like. The script is then recorded on a cassette and the slides are developed. Each group then presents its slide show to the class. Program originator Solomon Lustbader says, "Planning is a key element."

The Students

Thirty-five fifth graders work in small groups of three to five students one period a day for nearly six weeks. Most students can participate in this program.

The Staff

Lustbader developed this creative program about six years ago because he recognized the need for youngsters to learn by doing. He is supported by the administrators of his school who are very receptive to creative approaches and student-developed projects.

Materials and Facilities

Adequate supplies are essential to the success of this program. Included are an Instamatic camera, flash cubes, color film (one roll per group), cassette tape recorders, blank tapes, a slide projector and a screen. A variation of this project is the creation of sound filmstrips. After writing a script, the students put their original color drawings on blank filmstrips instead of taking pictures. As in the slide show, each frame is coordinated with the script in conjunction with recorded sounds.

Outside Resources

The program has received a New York State mini-grant for the creation of sound filmstrips funded through District 18. The students may need to use the public library, magazines, and other resource materials to expand factual presentations.

Overall Value

The students enjoy this cooperative project very much as their language arts, organizational and artistic skills are developed. Children become more respectful and supportive of each other, because they discover that in order to produce something worthwhile they must pool their talents and work cooperatively.

More Information

Solomon H. Lustbader
P.S. 244, District 18
5400 Tilden Avenue
Brooklyn, NY 11203

Telephone: 346-6240

Principal: Jerome Tiegel

Elementary School Mathematics

Grade 3

Contract Math

The Program

Contract Math is a needs-assessment based program which identifies students' specific strengths and weaknesses in mathematics. It employs criterion-reference based testing with individual work programs developed from the results of the diagnosis. The teacher administers a needs-assessment inventory (diagnostic test) to the entire class. The test may be either teacher-developed or any commercial standardized form of testing in current use with a minimum of two items for each skill. The teacher prepares an item analysis "key" which identifies each test item by specific skill. A class profile is also prepared. Based on the above, the teacher and the class draw up "contracts" to improve individual skills. Program originator Sheila Greenberg suggests that the work assignment for a particular skill be introduced at a level which will at first insure success so that each student may experience some positive achievement at the outset. The program assignments are independent of, but not a substitute for, the regular curriculum.

The Students

The Contract Math program was created for below-average third-grade students, but it may be applied to grades two through 12.

The Staff

Greenberg has been a teacher for 14 years. She notes that "during contract work time, the teacher functions as a floating facilitator, encouraging children to interpret pages, determine instructions and develop solutions to organizational problems involved in the performance of their tasks."

Materials and Facilities

Two or three alternative series of mathematics texts covering the levels indicated by the needs-assessment are essential. These texts should be other than the current class series. As no more than five copies of a level will be needed, such books should be available in the school bookroom.

Outside Resources

None.

Overall Value

The primary value is that the contract begins on a level at which the student is most comfortable. From that point on, the success of the program is measured by the improvement in arithmetic skills. Greenberg observes that, with the device of going back to a comfortable level and maintaining the individual work program, the children show "more confidence and willingness regarding all work in mathematics and related activities. A more positive self-image has resulted, as each child is able to begin, carry through, complete and submit a self-directed, self-monitored task with minimal teacher direction."

More Information

Sheila J. Greenberg
P.S. 157, District 7
757 Cauldwell Avenue
Bronx, NY 10456

Telephone: 993-6400

Principal: Edward J. Levy

Elementary School Physical Education

Grades K through 6

Movement Education

The Program

The Movement Education program uses a question-and-response, non-competitive approach to physical education. It contains a variety of movements, rhythms, dance and games. Children work individually and this helps eliminate fear of poor performance and isolation by their peers. They are free to discover their abilities and limitations in performing movement tasks. Competition is virtually non-existent. Program originator Charles Cappello provides each student with a work space and a piece of equipment (balls, marbles, jump rope). Different equipment can be used at the same time when solving movement problems. Children, therefore, can work at their own level in a non-competitive atmosphere. Music is used to motivate pupil performance. Listening skills, as well as a sense of rhythm, are readily developed by using music and the question-and-answer approach. Cappello has devised an extensive movement vocabulary to which his students readily respond.

The Students

Multi-ethnic students from kindergarten through sixth grade are taught in the gym with about 35 children in a class. Classes meet once or twice a week, depending upon scheduling. The program may be used for special education students and has already been adapted at P.S. 132K for children with cerebral palsy.

The Staff

Since 1973, Cappello, a teacher with eight years' experience, has been promoting the Movement Education program in various workshop settings. He has worked on curriculum development in physical education for the elementary school and is the only physical education teacher at his school.

Materials and Facilities

In addition to purchased items such as balls and jump ropes, Cappello uses such "found" items as clothespins to teach balance and milk cartons to teach eye/hand coordination. For dancing, records or tapes are essential. Cappello works closely with the P.T.A., which provides many of the supplies.

Outside Resources

Although Cappello does not use outside resources himself, he does recommend that they be used if they enhance the program. A selected bibliography includes:

Cameron, McDonald W., and Pleasance, Peggy. *Education in Movement—Gymnastics.* London: Basil Blackwell, 1971.

Kirschner, Glenn; Cunningham, Jean; and Warrell, Eileen. *Introduction to Movement Education.* Dubuque, IA: William C. Brown & Co., 1970.

Vitaglione, Lillian. *Children in Motion, Teacher's Manual.* Board of Education of the City of New York, for Channel 25 WNYE-TV, Televised In-Service Series, 1974.

A complete bibliography is available on request. Also, a four-page booklet, "Introduction to Movement Education," will be sent by Cappello to interested teachers.

Overall Value

Since children work "within their own space" and at their own level in a non-competitive atmosphere, they are free to develop fitness, coordination, body knowledge, rhythm and related curriculum learnings.

More Information

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320 Manhattan Avenue
Brooklyn, NY 11211

Telephone: 388-9446

Principal: Irving Rosenman

Elementary School Physical Education

Grades K through 6

Movement Education

The Program

Movement Education, a problem-solving approach to physical education, stresses skill development in a non-competitive way. It features a participatory approach that relies on "thinking to move." During a lesson, questions are posed and students attempt to do what is asked. Demonstrations by more athletic students or teachers are usually unnecessary, but can improve ability or motivate additional interest. Each student does what he or she can while improving skills through experimentation and practice. The beginning months of the program are devoted to such movement concepts as an awareness of space, direction, levels and pathways. When this is learned, equipment is given each child and attempts to improve continue. Formal games are also used, but not until the various skills required for a game are learned. Competition is not banned, but it is de-emphasized. A child who is actively learning is rarely a discipline problem. "If you had fun, you won," the program's developers say.

The Students

All 750 students in the school participate in the innovative and imaginative movement classes. The students, primarily black and Hispanic, meet once or twice a week in groups of 60 with two teachers in the gymnasium. Some special education children participate in the program, as well.

The Staff

Michael Carr, a former classroom teacher, and Richard Rhatigan, a physical education teacher, are now cluster teachers who use the Movement Education method. They believe all teachers can use this method since it is successful even with the nonspecialist. According to them, a belief and trust in the approach are the most important features for the educator. Principal George Morfesi believes that a solid physical education program should be part of every student's life and finds movement education a particularly successful approach in achieving a good physical education background for children.

Materials and Facilities

Ideally, a gym and enough equipment for every child is required. However, the teachers maintain that classrooms can be quickly converted into mini-gyms. In fact, they have created Movement Education lesson plans which incorporate movement instructions in the process of converting the room. Equipment is needed (balls, hoops, ropes, rackets, pucks and the like) and teachers have compiled a resource list of places where free materials or easily available cheap substitutes may be acquired. For instance, a wire coat hanger and panty hose will make tennis rackets suitable for movement education activities. The list is available through them.

Outside Resources

The teachers have not used outside resources, but they do stress using parental and community resources. For instance, they were able to get firehose from the Fire Department to use as boundaries in the gym. A selected bibliography includes:

American Association for Health, Physical Education and Recreation *Annotated Bibliography* on Movement Education, Washington, D.C.

Kirschner, Glenn; Cunninghom, Jean; and Warrell, Eileen. *Introduction to Movement Education.* Dubuque, IA: William C. Brown & Co., 1970.

Schurr, Evelyn L. *Movement Experiences for Children:* A Humanistic Approach to Elementary School Physical Education. Englewood Cliffs, NJ: Prentice-Hall Inc., 1975.

A complete bibliography is available from Carr and Rhatigan.

Overall Value

Carr and Rhatigan recommend the curriculum bulletin, *Physical Education K-6: A Movement Approach,* published by the Board of Education, the City of New York, Division of Curriculum and Instruction as a guide to teaching and a rich resource for ideas. The bulletin, *Minimum Teaching Essentials Grades K-6,* also from the same office, is an "excellent" indicator of the basic skills children should know by grade.

More Information

Students enjoy this approach to physical education and learning since they acquire skills and techniques in an atmosphere of support. They seldom tire of the activities because improvement is evident to them. For teachers, Movement Education offers a method of instruction without having inherent athletic abilities as a requisite to teaching. The Movement Education approach provides opportunities for combining other curriculum areas with the physical education experience.

Michael Carr and Richard Rhatigan
P.S. 15
71 Sullivan St., Brooklyn, NY 11231

Telephone: 330-9280
Principal: George Morfesi

Elementary School Physical Education

Grades K through 6

Individualized Physical Education

The Program

This physical education program develops specific skills, fitness and a desire to participate in physical activity. A "multi-station program" sequences games and exercises utilizing simple homemade and store-bought equipment. The result is that children can safely move from one activity area to another while practicing specific skills. The program combines equipment on hand (balls, rope, mats) and additional equipment from such "found objects" as milk cartons, old garden hoses, carboard. For a maximum expenditure of $300, hardware store materials (marine rope, clothesline, dowels) will enhance the supply of existing equipment. Before children use large physical education structures, approval by a representative from the Health and Physical Education Unit is required. The gym, playroom or school yard is arranged into well-defined activity areas that are a safe distance from other areas and large enough to practice specific skills of play games. Teachers evaluate students' ability to perform specific physical education skills before and throughout the program. Certificates for mastering skills act as incentives for students and are always within each child's capability range.

The Students

Grades K-6 are involved. One or two classes on the same grade can participate and the program can be used for large or small groups depending on the size of the play area and equipment.

The Staff

The program was developed by William Reder during eight years of trial and error. Reder is a trained physical education teacher, but classroom teachers equipped with a basic in-service manual and one or two training workshops can implement the program.

Materials and Facilities

Other simple homemade, found and store-bought equipment includes jump ropes, bamboo poles, tires, traffic cones (or boxes from lunchrooms), rope from marine hardware stores, old garden hoses, wooded blocks, library shelves, kindergarten tables, bean bags, tumbling mats and soft tug-of-war rope.

Outside Resources

The Board of Education's "High School Curriculum Guide on Physical Education and Movement" is a useful reference.

Overall Value

All children are encouraged to participate at their own level. Children are involved in a wide range of activities that help them develop skills and physical fitness. The program demonstrates to the classroom teachers that they are capable of organizing and conducting a varied physical education program for their classes.

More Information

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Principal: Saul Koren

Elementary School Physical Education

Grades 1 through 6

Movement Education

The Program

Movement Education is a dynamic, problem-solving approach to the teaching of physical education in which the students must think about moving in response to questions that the instructor presents. Problems are presented which develop the child's ability to use space, improve strength, agility and endurance, and identify and use different body parts. For example, "Can you hold the hoop with one hand and step through it backwards?", or "How small can you make yourself?" Any response that answers the question is acceptable. Movement Education is non-competitive and depends on personal initiative. Sometimes the students work as partners: "What type of shape can you make if two bodies are touching at one point?", or "How can two people turn themselves into a machine with one working part?" Creative responses are commended. Skills that are also practiced by problem solving include ball handling, rope jumping, gymnastics and dance. Some activities may be set to music. Movement Education is simple, and any teacher can master the essentials.

The Students

About 815 students from kindergarten through sixth grade take part in this program. All ability levels are involved, including special education and non-English-speaking students. The kindergarten through fourth-grade classes meet twice a week, and the fifth- and sixth-grade classes meet once a week, two classes at a time.

The Staff

Bernice Wolman started the first experimental program eight years ago with one first-grade class. Now she's a cluster teacher, teaching all Movement Education classes, two classes at a time. One regular teacher assists her, while the other teacher is released for preparation period. Wolman has trained various New York City teachers in her techniques. She has excellent principal support.

Materials and Facilities

Any large space such as a gymnasium or lunchroom will do. Course material is small and inexpensive, and each child is provided with everything he or she needs. There is no waiting for turns. Two problems requiring different equipment may be given at the same time if materials are in short supply. Suggested for beginning a program are hoops, balls, jump ropes and bean bags.

Outside Resources

No outside resources are needed, because the students "don't look, they do." A selected bibliography includes:

Brown, Margaret C., and Sommer, Betty K. *Movement Education: Its Evolution and a Modern Approach.* Reading, MA: Addison-Wesley, Co., 1969.

Gilliom, Bonnie Chirp. *Basic Movement Education for Children: Rationale and Teaching Units.* Reading, MA: Addison-Wesley Co., 1970.

Latchaw, Majorie. *A Pocket Guide to Movement Activities for the Elementary School.* Englewood Cliffs, NJ: Prentice Hall, 1970.

A complete bibliography is available on request.

Overall Value

"This is a program for every child, regardless of physical endowment or ability," says Wolman. "Everyone can be successful. There's a lot of opportunity for praise, very little reprimanding, and no waiting. It is non-authoritarian, non-competitive, creative, ego-building, and it stimulates both thinking and physical effort at the same time. Students love it."

More Information

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Flushing, NY 11354

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Principal: Jack Siegel

Endangered Species through Art

The Program

The Endangered Species through Art program is an interdisciplinary approach to science and social studies that utilizes music and art to focus on and interpret the program's subjects. Program originator Rosanne Palamaro stresses traditional academic skills in the program, including basic research, reading of books, writing reports and developing vocabulary on the topic of endangered species. The students build natural habitats for the models of the endangered species that they have discussed and researched. They listen to and write music describing the animals. They take field trips to parks to observe firsthand and discuss the animals' natural environments. They write letters to government agencies requesting information. They also write and produce plays and publish a newsletter. Palamaro considers the program an enrichment project with a wealth of material which could also constitute the backbone of a classes' learning.

The Students

Thirty-five fifth graders of average and above-average academic ability participate in this interdisciplinary approach to the problems of endangered species. The students represent a variety of ethnic backgrounds and come from low- to middle-income families.

The Staff

The program was developed in 1976. Palamaro has an academic background in education and reading, but has no formal training in music and art and believes that it is not necessary. She does, however, have a deep personal commitment to the topic. She receives no paraprofessional, volunteer or parent support for the program. She has received support from her principal who allows her a "free hand."

Materials and Facilities

Any classroom is appropriate. Regular classroom materials can be used, but there are some other materials that enrich the program greatly. Art supplies, including plasticraft, paints, fabrics and such are used to make the animal models and natural habitats. Living animals, like gerbils, are also ideal. Rock and shell collections are helpful in developing various natural habitats. There are several resource books, filmstrips and charts which Palamaro recommends and would be willing to offer to any interested teacher.

Outside Resources

Trips to the American Museum of Natural History, High Rock Seashore and the Gateway National Recreation Area enrich the program. There are also speakers available through government agencies who can visit classes. Libraries are also used. Some background and commitment to the concept are helpful, but Palamaro says that the basic information needed is easily acquired through several standard resource books (one is *Wonders of Nature,* Parents Magazine Press, New York 1974). Also, such magazines as *National Geographic* and *National Wildlife* are good.

Overall Value

At this age, children for the most part love animals. A curriculum which develops an ecological awareness and a fuller understanding of the complicity among all elements of nature is a program students enjoy. Such a program also allows them to express their ideas through art, thus heightening their enjoyment and self-awareness.

More Information

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Brooklyn, NY 11220

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Principal: Joseph Thaller

Elementary School Science

Grades K through 4

Plants as Livings Things

The Program

Plants as Living Things is a science program for early childhood students that is designed to develop and increase children's understanding of plant growth. Using a variety of teaching methods including direct experimentation, trips, audio-visual aids and observation, the program developers hope that the students involved will learn the appropriate scientific principles. There are corresponding language activities with the written records of experiments, cognitive activities in the classification of seeds, mathematical activities with graphing the growth of a plant, and art activities involving fruit or vegetable prints. The program is designed to aid children in developing appropriate readiness skills for formal instruction in language arts, reading, and mathematics, as well as helping them form attitudinal qualities that will have far-reaching effects.

The Students

Approximately 60 kindergarten and first-grade pupils in two heterogeneous self-contained classrooms participate in this program. Both classes are multi-ethnic and represent a wide range of ability. The program also has been used successfully with third- and fourth-grade pupils. It can be adapted to any grades, kindergarten through sixth, and any level of ability.

The Staff

Linda Schwartz and Suzanne Soll, two experienced teachers, developed this program together in the early 1970's in response to a citywide contest, "Dress Up Your Neighborhood." Anyone desiring to implement a similar program would be aided by having a knowledge of plant growth, but the basic information is easily obtained from books on houseplants and gardening and from science curriculum bulletins. Schwartz and Soll each have a part-time student teacher and also solicit parental help on a volunteer basis. No special administrative set-up is necessary.

Materials and Facilities

Many plants can be grown on windowsills where natural light is adequate. Each classroom has purchased a flourescent light fixture with two 40-watt tubes to enhance and expand the indoor growing conditions. Heating cables are also used to germinate seeds and propagate plants more rapidly throughout the school year. Potting soil, pots and a variety of plants are available so that each pupil can propagate and grow his or her own plants.

Outside Resources

In addition to classroom experiences, the children can plant and tend a small outside garden in the schoolyard in the fall and spring. Field trips include visits to Riverside and Central Parks, the New York Botanical Garden, the American Museum of Natural History, and various neighborhood walking trips.

Overall Value

According to Schwartz and Soll, students develop and increase their understanding and knowledge of plants as living things through "hands-on" activities with a variety of planting experiences. They also develop a sense of responsibility by providing for the needs of their plants on a regular basis and in so doing learn to control and enhance their own environment.

More Information

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160 West 78th Street
New York, NY 10024

Telephone: 678-2826

Principal: Henry Kobasky

Elementary School Social Studies

Grades 3 through 6

Contract Learning

The Program

Contract Learning is a method of individualizing instruction for the academically gifted while providing enrichment for the subject areas of social studies, language arts, science, math and literature. Contract Learning is an agreement between the teacher and student about how much work he or she will do on a topic and when the work will be due. As program originator Helene Bergman explains, "The contracts are formulated cooperatively by teachers and pupils; the activities are based on concepts to be mastered, pupil talents and interests, pupil instructional level and materials available." Each contract provides a wide range of creative and highly stimulating experiences for pupils to choose from. For example, in "Early Man," a sixth-grade social studies contract, students are introduced to archeological terms while given a choice of sculpting a skull of an early species, researching evolutionary theories or writing creatively about "A Day in the Life of an Archeologist." Other contracts provided as samples include ancient Greece and Rome, colonial America, mythology, fables and science fiction. In addition, there is a self-awareness contract called "All About Me" which encourages third or fourth graders to observe, explore and comment (through pictures and words) on themselves and the world around them. When contract work is completed, students share their products with their peers, parents and other classes.

The Students

Contract Learning is one of the instructional methods used for the gifted classes in grades three through six. Each class contains approximately 32 pupils who have been identified throughout District 7 as meeting the criteria of academic achievement/potential, leadership and creativity. All of the students are minority children.

The Staff

Bergman, a teacher for 18 years, developed this program when she was a classroom teacher of the gifted. All staff members participate in on-going development workshops to increase their knowledge and skills in meeting the needs of the gifted; learning to devise Learning Contracts is one aspect of this training. The Administration supports this program by providing materials and training for curricula adaptations. A resource center for the gifted will enable staff members to develop curricula and these will be made available to interested parties.

Materials and Facilities

The Contract Learning program is implemented within the self-contained classes, yet many activities are done in the library and art room and others completed at home. When a contract is devised, student and teacher cooperatively collate the media and materials necessary for the work (i.e., filmstrips, research sources, textbooks, and art supplies).

Outside Resources

In general, contracts do not necessitate the use of outside resources. But, teachers often visit museums, art galleries, science exhibitions, libraries and theatres to reinforce the program's concepts. Guest speakers and also home and community resources (i.e., television and store merchants) are also useful.

Overall Value

Students develop task commitment, long-range planning orientation and a sense of responsibility and pride. Since they work both independently and with others, Contract Learning facilitates various learning styles. Its wide choice of activities fosters student decision-making and risk-taking, nurtures talents, and develops the higher-level thinking skills. Evaluation of the program has shown that pupil participants generally score two years above grade level and that a greater number of pupils achieve concept mastery, especially in social studies.

More Information

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Bronx, NY 10451

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Principal: Carol Russo

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Elementary School Social Studies and Language Arts

Grade 4

Multi-Ethnic Studies

The Program

This is a one-year, multi-ethnic program that stresses human relations. It begins with the recognition and discussion of the ethnic makeup of the class. Next, cultural subjects are explored. Students study individual "roots," cooking, singing and dancing, each within the context of their ethnic backgrounds. ‘This builds a greater appreciation of our multi-ethnic society," according to program originator Selma Brenner. She has structured her program so that her students develop an understanding of the American mixture through various disciplines. Through social studies students examine traditions and customs of many countries, trace the migration of groups from the homeland to the United States, and discuss why people immigrate. The language arts portion is combined with ethnic literature. Examples include black language and French, Spanish and Hebrew songs. Parental involvement is encouraged, usually through donations of ethnic recipes. Introductory materials are available.

The Students

This program is used by fourth-grade students, but may be modified for any group, depending on the student makeup. Brenner's class of 30 students is mostly black and Hispanic. They meet for a full school day, five days a week.

The Staff

Brenner, a teacher with 13 years' experience, developed this program after a workshop session at the district office. She has implemented the program by herself and recommends that teachers begin by revealing and discussing their own ethnic backgrounds.

Materials and Facilities

Books containing folk tales are essential. Brenner recommends researching folk tales from a variety of countries. Old photographs can be stimulating, and Brenner encourages students to bring in family pictures. Also, cassettes and film strips dealing with ethnic groups may be useful.

Outside Resources

Photographing signs and posters as a basis for class discussion is useful, as are museum trips, ethnic newspapers, the identification of various sports figures and simply recognizing individuals in the neighborhood. Brenner recommends *Human Relations Education Guidebook* from the New York State Education Department, Albany, 1969.

Overall Value

The many activities created by this program provoke enthusiastic classroom discussion. "With the exchange of observations and experiences and studies," says Brenner, "comes a gradual change in values and in perceptions regarding ethnic groups which make up our society."

More Information

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Brooklyn, NY 11210

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Principal: Dr. Herbert Shapiro

Elementary School Social Studies

Grade 6

Linking Past and Present through Art

The Program

This program is really an enrichment component to sixth-grade social studies utilizing replicas of ancient art objects as motivational devices. As the students study ancient civilizations, they are introduced to corresponding artifacts which they can actually handle. For example, ancient Egypt is studied in conjunction with scale models of mummies, the Rosetta stone and replicas of jewelry, as well as field trips to the Egyptian collection at the Metropolitan Museum and the "King Tut" documentaries on television. Students can also be encouraged to make replicas of ancient artifacts.

The Students

The program includes two sixth-grade classes, or approximately 75 students. They average about 30 minutes each week of hands-on art appreciation, but this is flexible and at the discretion of the teacher. The program can also be for average and lower-grade students.

The Staff

Walter Kennedy, a research Ph.D., is an elementary school teacher who developed the program. He acts as a resource person, helping two sixth-grade teachers implement it. In addition, a part-time cluster teacher acts as "curator" of the school collection, while two parents with art degrees act as consultants. Occasionally, they give slide shows on their travels to Greece, Egypt and Italy. The program requires both administrative and community support as it makes use of various resources.

Materials and Facilities

P.S. 229Q has a "museum" consisting of a 300-square-foot locked room with about 40 replicas of sculpture and jewelry and about 80 pictures of ancient art objects on shelves and display tables. Replicas and pictures can be obtained from Alva Museum Replicas, Inc., in Long Island City, or they can be borrowed from parents, teachers, or interested community people.

Outside Resources

Field trips are encouraged, especially to the Brooklyn Art Museum, the Metropolitan Museum of Art (both of which have school arts programs) and the American Museum of Natural History. Various groups, such as the Italian House at Columbia University, the Dante Society, Italian Charities, Sons of Italy and the Greek and Egyptian consulates can act as resources. Also, interested parents can lend and/or show slides of their travels.

Overall Value

"This is something that will stay with the children," says Kennedy. "It has aesthetic value, serves to motivate social studies learning, and also has a career education aspect. In addition, it gives children constructive outlets for their leisure time."

More Information

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Principal: Arman Colangelo

Elementary School Social Studies and Language Arts

Grade 6

Researching Ancient Civilization

The Program

The Ancient Civilization research program consists of a step-by-step process through which students learn to do research. The teacher gives an overview of the process and accompanies the students to the school library. There he or she introduces them to various topics so that they can choose a specific research question, e.g., "How significant a role did Ikhnaton play in Ancient Egypt?", or "How did the Roman republic develop?" Even though the class follows the curriculum chronologically, students can pick or change their topics anywhere in the course. They are taught how to use such school and public library sources as textbooks and encyclopedias, the *Reader's Guide to Periodical Literature, The New York Times Index*; how to take notes on index cards; and how to organize their information. The language arts teacher gives instruction on style, punctuation, footnotes and bibliography use. The students write a draft, and then the full report, using their own words as much as possible. "Seventy-five percent of the reports I get are very good," says program originator Lawrence R. Mucelli, who encourages his students to present their projects to the class together with illustrative material. Students get two grades on the reports, one from the social studies teacher and one from the language arts teacher. Teachers wishing to duplicate the program may request an explanatory booklet from Mucelli as well as a series of rexographed sheets, "Preparing the Research Report."

The Students

About 35 sixth graders participate in this program for one period four times a week. They are above-average students, generally from middle-class backgrounds. The program also works with seventh, eighth and ninth graders.

The Staff

Mucelli developed his program in a Bronx ghetto school to raise the goals of above-average students. He instituted the program with the support of his principal, and subsequently brought it to I.S. 24 on Staten Island. Mucelli has the cooperation of the language arts department, as well as excellent administrative support.

Materials and Facilities

Duplicating materials such as rexograph sheets, and assorted art supplies are needed. Students can cut out magazine pictures and make their own slides with a filmstrip kit (Filmmakers, Visual Literacy, Arcadia, CA 91006).

Outside Resources

The use of the public library is important, and trips to museums are also worthwhile. *Preparing the Research Project* by Dangle and Haussman (a College Entrance Publication) is essential.

Overall Value

When students finish a report, they have a sense of accomplishment, the I-never-thought-I-could-do-it feeling. This program helps develop reading and writing as well as useful research skills for higher education which are applicable in all fields. Students learn to look critically and interpretatively at newspapers and other sources of information. As Mucelli observes, "This is invaluable to becoming a responsible, productive citizen."

More Information

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Staten Island, NY 10308

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Principal: Maureen C. O'Brien

Social Studies through Stamp Collecting

The Program

In this program, stamp collecting is used as a motivational device to teach social studies. Students receive instruction in the basics of stamp collecting, including how to find, classify and handle stamps. Research techniques are taught. Then, starting with an event or place depicted on a stamp, the class is divided into four geographic areas of the United States—northeast, midwest, west, south—with each student doing research on a state he or she has selected. The four groups prepare class presentations. They also play travel bureau, trying to attract the other students to their part of the country for vacation. Many variations are possible on this program's theme. Program originator Steven Ozer would like to extend the program to include American history, puppet shows and dramatic readings.

The Students

Forty-one fifth graders participate in this program during four class periods per week. The students are a mixed ethnic group with average and above-average reading scores.

The Staff

Ozer, a regular classroom teacher for 11 years, developed the program a year ago. He has the support of his principal and the help of one student teacher.

Materials and Facilities

Each student needs to buy a stamp album (the type depending on the social studies unit studied) while two students can share a copy of *22 Stamps and Stories*, sold by the U.S. Postal Service. Other necessary resources and materials include film strips, a cassette tape recorder, art supplies and task cards.

Outside Resources

The public library is very important for its almanacs, atlases, encyclopedias and American history texts. So are field trips to the American Museum of Natural History, the Museum of the American Indian, the Museum of the City of New York, the South Street Seaport Museum and the Immigration Museum in the Statue of Liberty.

Overall Value

Stamp collecting is an exciting hobby that can last a lifetime. Participating students end the program with a stamp album they can be proud of and which demonstrates that they know how to collect stamps. They have also learned a variety of research skills and resources, and improved their reading.

More Information

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Bronx, NY 10458

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Principal: Harry Teitelbaum

Intermediate/Junior High School

"Project Synergy," Robert Wagner J.H.S., Manhattan
Photo: Margot Jones

Junior High School Art

Grade 8

Art in Nature

The Program

For two double periods each week, the art talent class meets throughout the school year with concept originator Adele Unterberg and guest lecturers or instructors. Students tour various neighborhoods with nature guides, sketching local plant life, developing individual notebooks containing sketches and comments. Then, working in pencil, watercolor, craypas or pen-and-ink, they draw and/or paint from the sketches or from specimens they have collected along the way. Students have been given special tours of the Brooklyn Botanical Gardens and the New York Botanical Gardens with a private guide assigned to the group. They also meet for specially arranged sessions at the American Museum of Natural History, for inquiry into three themes: (1) What is a flower (parts identification/laboratory work/dissection of flowers); (2) Why are certain birds and insects attracted to specific flower forms; and (3) What are the conditions that determine where plants grow, and what are the principles of adaptation? The students create still-life paintings, linoleum blocks, art cards, book marks, dried flower markers and, at the end of the term, bottle gardens. Students also prepare an extensive presentation on a selected flower or plant, using the scientific background they have acquired during the program. The second term includes planting a school garden and maintaining it, while learning to combat the less friendly forces of nature and man in the process.

The Students

Thirty-two eighth graders, members of the art talent class, are involved in this program. Primarily black and Hispanic youngsters, they live on the Lower East Side.

The Staff

Unterberg, an art teacher for the past 11 years, developed a formal version of this program three years ago. While she is the only person assigned to run the program, she credits assistant principal and science chairman Phillip Levitus for his contributions as guest lecturer and chief supporter. Teachers should do extensive reading and investigation of plant life and the natural sciences in preparation for this course.

Materials and Facilities

An art classroom with ventilation, running water and ample work space is desirable, but Unterberg's program flourishes in spite of a less-than-adequate studio. Reading materials provided by such government agencies as the Department of Agriculture and the Environmental Protection Agency are helpful, as are botany charts and other large illustrations of plants and plant life. Reproductions of paintings and drawings by such artists as Audubon and Durer also inspire the young artists. Unterberg is prepared to distribute a packet of program materials upon request. Also, a student-prepared guidebook is currently available.

Outside Resources

The services provided by the American Museum of Natural History and the two botanical gardens contribute enormously to the success of this program. They provide instructors who plan and co-teach with Unterberg and also give out free and inexpensive instructional material. The Audubon Society and the Central Park Task Force are also important resources. A selected bibliography includes:

Parker, Bertha Morris. *Fall is Here* (The Basic-Science Education Series). Evanston, IL: Row, Peterson & Co., 1955. (Ages 6 through 9.)
Shuttleworth, Floyd. *Non-Flowering Plants.* New York: Golden Press. (Ages 7 through 12.)
Zim, Herbert. *A Golden Guide to Flowers.* New York: Golden Press. (Ages 7 through 12.)

Overall Value

"Art as a subject gives strength to any area of study," claims Unterberg. "It helps people realize that it is not an isolated subject, but integral to any area of inquiry. I chose natural science because I think it is important to me as an artist, and to my students as potential artists and appreciators of art, to recognize and honor the natural environment. It also happens to be a topical issue in relation to ecology."

More Information

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Principal: Jack Levine

Junior High School Social Studies

Grades 7 and 8

Integrating Social Studies

The Program

Integrating Social Studies is a bilingual seventh- and eighth-grade social studies program. This Spanish-English program is primarily for bilingual students and deals with the federal government, concepts of freedom, local government and law, Puerto Rican and black history, and economic, historic and social developments arising out of successive waves of immigrants (beginning in 1865). The Puerto Rican unit deals with the history of the island and its relationships with the United States after 1898. Black history begins with slavery and goes past the landmark Supreme Court decision of 1954 to the 1960's. Program originators Philip Gross and Walter Kurtzman note that sections can be updated. The purpose is to enrich, supplement and coordinate material developed by the bilingual teacher. The program is administered in coordination with the bilingual department.

The Students

The students are in grades seven and eight. The program is directed at Spanish-speaking bilingual students. English translations are also available for other interested students.

The Staff

Gross and Kurtzman, a teacher and assistant principal, respectively, designed their program from historical works, poems and a variety of written accounts of significant historical events. They have encouraged students to add to the literature. An English-Spanish translator must be involved in the program, so that the social studies program is faithfully duplicated. A bilingual social studies teacher would be an ideal teacher to implement the program within a school. Gross and Kurtzman function as a team, creatively and administratively. Gross wrote all of the social studies units in the project and Kurtzman directed the overall supervision and design of the program.

Materials and Facilities

The learning package consists of lesson plans, homework assignments, all supportive materials, maps, cartoons and mimeographed reading material including "learning outcomes"—what the students should learn. The units in Spanish are American government, and Puerto Rican and black history and culture.

Outside Resources

None are needed.

Overall Value

This material would be of value in any school where a bilingual program is being conducted. The Spanish-speaking student who is still having difficulty with English may be able to learn basic social studies concepts such as freedom and democracy as well as some of the major seventh- and eighth-grade social studies units.

More Information

Philip Gross and Walter Kurtzman
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345 Brook Avenue
Bronx, NY 10454

Telephone: 665-8448

Principal: John M. Quinn

Junior High School Spanish

Grades 7 through 9

Hispanic Culture through the Arts

The Program

The program uses marionettes and student-made masks to teach Hispanic culture and the Spanish language. In Level One, students read simple plays based on *Don Quixote de la Mancha.* Marionettes, dressed for the various parts, are used to act out the roles. They are also used to converse in Spanish, and because they "speak" for the students, their mistakes are easily "forgiven." Level Two contains the Indians of South America unit. Children study the history, culture and geography of the Aztecs and Incas using film strips and making masks. Teachers interested in the program can get copies of background sheets and sample plays from program originator Thomas Regan.

The Students

Five classes of Spanish on both Levels One and Two meet for one period daily. They are composed of seventh, eighth and ninth graders of mixed backgrounds and average and above-average ability. The program can be adapted to elementary school.

The Staff

Regan, a Spanish-language teacher, developed the program together with his wife, Patricia. He implements it alone and has very good student cooperation as well as administrative and community support. One of his students designed and donated masks used by the class. Others contributed art supplies for various projects. In addition, Regan's assistant principal contacted local banks, department stores and libraries asking them for display space for Spanish and French projects. Regan's class-made masks were also displayed at the New York State Association of Foreign Language Teachers regional conference.

Materials and Facilities

Regan uses about 20 marionettes and numerous slides collected during his trips to Mexico. To make masks, students need colored paper, magic markers, glue and string. Maps are also useful, as are a projector, screen and film strips.

Outside Resources

The local public library is the best source for books on Latin America. Field trips to museums are also a good idea. A selected bibliography includes:

Bleeker, Sonia. *The Inca Indians of the Andes.* New York: William Morrow & Co., 1960.

Comins, Jeremy. *Latin American Crafts and Their Cultural Backgrounds.* New York: Lothrop, Lee & Shepard Co., 1974.

Von Hagen, Victor W. *The Incas: People of the Sun.* New York: 1961.

Overall Value

These activities allow for committee work in the language classroom. Important skills are refined, i.e., listening to others, planning and cooperating to produce something worthwhile. The end product is often something that can be displayed at such places as academic fairs, showcases or assembly programs. This is good public relations and students enjoy it. Staff members are aware that different and interesting things are going on in the language classroom. The student body, administration and parents also become aware of positive things to which they can relate.

More Information

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Flushing, NY 11355

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Principal: Jerome Rosovsky

Junior High School Language Arts

Grades 6 through 9

Poetry and Prose Punctuation

The Program

This program promotes students' ability to create interesting poetry from their original prose. Employing appropriate prose punctuation, and thus reinforcing prose needs, the students convert their prose into poetry with little or no change in word sequence. The conversion relies on clause and phrase identification, dramatic opportunities, rhythm, and visual preferences. Only accidental or incidental rhyming is permitted, and even that is generally discouraged. Students realize that they need not approach poetry with the finished product in mind. They are taught to use punctuation throughout, to clearly organize relationships and thoughts, and to be sensitive to reader reactions to their employment of pausing techniques. Frequently, real poetry is produced.

The Students

Language arts students from any background or achievement level can successfully use this program. The slower students simply require more individualized direction after full class instruction.

The Staff

The program was developed by Marcus Brown, and he has been using it for several years. No specific background in language arts is required, except perhaps respect for the value of original poetry in the junior high school classroom. The program will make teachers who are not completely comfortable doing poetry with children much more at ease in such instruction. No assistance is required, nor is special administrative support, other than encouragement and recognition of students' efforts and results, which has been the case with this program.

Materials and Facilities

Ideally, the activity should integrate reading, writing, speaking and listening. This includes feedback of results. No special textbook is required. Cassette tape recorders are particularly helpful in improving students' perception of the importance of punctuation. Students like to hear their work read by themselves and others, and the significance of punctuation for achieving different types of emphasis throughout a poem can be dramatically demonstrated with a tape machine. The use of a blackboard is also essential.

Outside Resources

Teachers in such a program should keep in touch with local and other poetry contest opportunities. Arrangements should also be made for local poetry readings at PTA functions and in other classes and schools.

Overall Value

Many students who would not otherwise do so now write poetry from prose. They do it freely and often. They also become more sensitive to the writing rhythms and sentence structure in prose when they go through this program. The program releases many students from feelings of insecurity in dealing with the peculiar demands of writing poetry. Much fine poetry has been produced every semester, including three poems last semester that were accepted for public reading by their authors at the World Poetry Festival in Harlem.

More Information

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The Jackie Robinson Intermediate School (I.S. 320, District 17)
46 McKeever Place
Brooklyn, NY 12225

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Principal: Adele Charyn

Junior High School English

Grades 7 through 9

Writing the Essay

The Program

Writing the Essay is a singular, intermittant unit within this special progress English course designed to improve students' writing. The students are introduced to light, humorous essays (e.g., "Coping with the Compliment," by H.A. Smith, and "How to Get Things Done," by Robert Benchley) to stimulate their writing. Using the essays as models, students are encouraged to create something out of their own experiences and observations. Program developer Lola Cronacher stresses humor, dialogue, sentence structure, style and punctuation. "But," she says, "I don't get too technical. I have to know when to stop." The fun of writing is what's important to her and the students. The unit is taught for three weeks and then dropped. In the interim, the students read plays, novels, poetry, biographies. Then back to essays and writing. "I'd lose the kids if I did it straight," says Cronacher. All told, 12 weeks out of the year are dedicated to essay writing.

The Students

Thirty-five bright, special-progress (SP) students participate in this English program five times a week. They are seventh, eighth and ninth graders of mixed backgrounds. Although the program has been done with non-SP students, it doesn't work as well and requires different materials and techniques.

The Staff

Cronacher, a junior high school English teacher with 15 years' experience, developed the program in 1962, together with Dr. Deborah Elkins of Queens College. They co-authored a book, *Teaching Literature: Designs for Cognition Development* (Charles Merrill, 1976). "Since then," says Cronacher, "I've modified and changed it." She receives support from her principal and colleagues, and the school librarian is a particularly important resource person.

Materials and Facilities

Posters (from Argus Communications Co.) can be used to inspire writing, as can records. But most valuable to this program is the school library.

Outside Resources

"No one truly adequate textbook exists for the junior high school student that contains essays appropriate for study as literature and/or as an inspirational model for imitating that style of writing. We need a textbook that hits the mark today," says Cronacher. Her present bibliography includes:

Greene, J.E. (Ed.) *Essays for Modern Youth.* NY: Globe Book Co., 1960.
Bush, Jarvis E. *Currents in Nonfiction.* New York: Macmillan Publishing Co., Inc., 1974.
Arscott, John R. *Introduction to Nonfiction.* Kentucky: McCormick-Mathers Publishing Co., 1977.

Other resources include field trips to museums, the public library, television programs, current events (see "Using TV to Teach Writing" by Frank Viviano, *American Education,* Summer 1979, and "The Tape Recorder as Writing Teacher" by Patrick Hartwell, *Media and Methods,* November 1978).

Overall Value

"It's important for the future of this country that students learn how to express themselves with the written word," says Cronacher. "The last decade of educational systems has failed dismally to produce competency in writing. This program is an attempt to reverse that direction and has met with a measurable degree of success. Students enrolled in this program have even won awards for their writing entries."

More Information

Lola Lee Cronacher
Campbell Junior High School 218
65-25 Main Street
Flushing, NY 11367

Telephone: 544-9700

Principal: Bernard O'Kane

Junior High School English/Italian (Bilingual Program)

Grade 7

Flare: Foreign Language and Relating English

The Program

This is a bilingual program that utilizes the study of Italian to develop a structured, critical approach to English. Both classes cover grammar, vocabulary, literature, creative writing and conversation. A linguistics approach encourages students to identify basic parts of speech. Italian and English literature is studied in detail. Students answer questions completely and directly and write in both languages in an order that is clear to another reader. Vocabulary work centers on cognates plus sound to help with the spelling of new words in both languages. In addition to conversations in English and Italian, public reading in both languages is stressed. Also, there are special research projects, including book reports on the lives of famous Italians. These are written in the first person to help with the identification process. Basically, the study of Italian syntax, reading, writing and speaking skills becomes the cross-over for identical studies in English. Thus, the program helps the average students gain insights into his own language and build the inner confidence needed to learn a second language.

The Students

Students are average and below-average young men and women who are having a difficult time with such basic skills as learning to identify a question and writing the complete answer. There are 30 ethnically mixed students who meet for five double sessions a week plus home room. The morning and afternoon sessions make for "lots of contact" and a great deal of flexibility in structuring the lessons to the particular needs of these seventh-graders.

The Staff

Program developer Laura Pignatelli has been teaching for 10 years. She implemented this program with the support of her principal who was particularly helpful in the area of arranging for double-period programming.

Materials and Facilities

Pignatelli uses ALM (audio-lingual method) dialogues as a basis for conversation in Italian only. A variety of materials relating to grammar and literature are used and have been teacher developed. This wide selection enables her to create specific individualized sheets whenever the situation warrants it.

Outside Resources

The students benefit from visits to interview senior citizens, politicians, businessmen, immigrants or anyone who has had the experience of having to learn a second language. A selected bibliography includes:

Conlin, David A.; Herman, George R.; and Martin, Jerome. *Our Language Today* 7. New York: The American Book Company, 1966.

Hoopes, Ned. *Stories to Enjoy* and *Plays to Remember.* London: The Macmillan Company, 1970.

Rauch, Sidney J., and Zacharie J. Clements. *World of Vocabulary,* Book 2. New York: Globe Book Company, 1976.

Other references are available on request.

Overall Value

Students develop structured work habits and organizational abilities in addition to reading, writing and conversational skills in both languages. The study of Italian feeds the study of English and vice-versa. Pignatelli finds that it is easier to teach both languages in this coordinated way and that students learn better and demonstrate great enthusiasm for this bilingual approach. Pignatelli notes, "I have received positive feedback from former students and their parents. The program helps the first year junior high school student develop ways to interact socially and accept increasing responsibilities in life."

More Information

Laura Pignatelli
J.H.S. 101, District 8
2750 Lafayette Avenue
Bronx, NY 10465

Telephone: 822-5302

Principal: Betty Curiale

Junior High School Mathematics

Grade 7

Math without Fear

The Program

Program originator Fred Blansky feels strongly that there are no commercial mathematics texts or workbooks available that deal adequately with remedial mathematics. He feels that most books introduce a concept or skill, but then return to that concept only at the end of the chapter. To help correct this, Blansky has written a 200-page workbook for his students. Using simple language, it progresses from fourth- to seventh-grade mathematics, following the New York City curriculum. Each page, distributed daily, introduces a new skill and reviews in sequence concepts or skills worked on before. The workbook supplements the teachers' guide, which presents clearly and succinctly the lesson which needs to be taught each day. Workbook pages are then handed out for either practice or homework. Blansky corrects them nightly, and then returns them the next day for the students to put into their looseleaf notebooks, which then act as workbooks. His greatest problem now is having to rework each page when the master fades. He also feels that students should progress into an eighth-grade class to continue the work they have begun. Classes should start at the beginning of the school year. The aim is to bring the average student from 3.5 to 6.5 in mathematics ability in a year.

The Students

About 125 seventh-grade students participate in this comprehensive remedial math program. The students, all black and Hispanic children, score between 3.0 and 5.5 on standardized mathematics tests. To alleviate the problem, they receive mathematics six times a week.

The Staff

Blansky has developed this program over the last five years, modifying and refining it yearly. Blansky has been teaching for seven years, and although his own background is in engineering he maintains that "if any particular strength or expertise is needed to replicate this program, it's a failure." He has no paraprofessional or volunteer help.

Materials and Facilities

This program is dependent on the lesson plans and workbook sheets that Blansky has developed and written. It is a self-contained, complete program which can be duplicated. Blansky is willing to lend his materials to any teacher interested in working with them and who has the time and commitment to copy all the sheets.

Outside Resources

None are needed.

Overall Value

Students who have consistently failed mathematics need materials geared to their low levels of achievement that can offer built-in reinforcement and encouragement. This material, by constantly repeating and reinforcing skills, allows a student to use and, therefore, remember basic concepts and skills. The student never has to cram for tests or relearn forgotten tricks. There is a snowballing effect: The student receives a good grade because he or she has worked daily with the material and now truly wants to continue getting good grades. Blansky sees an average of 2.3 years' progress for his students in one year. He has also seen a marked difference in their attitude towards mathematics and, consequently, improved behavior in class.

More Information

Fred Blansky
I.S. 292
300 Wyona Street
Brooklyn, NY 11207

Telephone: 498-6560

Principal: Theodore Wexler

Junior High School Mathematics

Grade 8

Calculator Math

The Program

The Calculator Math program's aim is to make students feel positive about mathematics. During the first two weeks, the teacher uses flow charts to introduce the step-by-step approach to doing anything, from tying shoe laces to making phone calls. Next, the calculator is introduced with a printed picture and flow chart, while 10 calculators are set up in the back of the room. The third step is a review of computation skills. Students are given problems to do but the teacher doesn't tell them whether or not their answers are correct; students find their own errors by checking their answers against a calculator. Once this method has been mastered, students can begin to deal with elements of regular eighth-grade mathematics. Gross has sample flow charts and assignment sheets to show to teachers interested in using this program.

The Students

Two classes of 35 students each participate in this program for five periods a week. The students are a mixed ethnic group of eighth graders with mathematics scores generally three to four years below grade level. They take this course instead of regular mathematics.

The Staff

Helen Gross developed this program six years ago and is currently implementing it without aides. There is administrative support, which is very important.

Materials and Facilities

Duplicating materials such as stencils and rexograph are essential, for every lesson is presented as an activity sheet. "I try to put all instructions on paper so I can concentrate on helping the individual," says Gross. The other essential is a set of printing calculators and tapes. These must be kept in a locked room for security.

Outside Resources

"Whatever I read about, I like to try," says Gross.

Overall Value

Gross gives standardized achievement tests at the end of the program. In previous years, results have been excellent. Says Gross: "Students don't like to be told they're wrong; they like to achieve. This method makes them work harder. Truants have been known to come to school for math and lunch and then leave. Misbehavior in the classroom has been reduced. If they 'act up', they don't get to use the machines."

More Information

Helen H. Gross
J.H.S. 189Q (Daniel Carter Beard J.H.S.)
144-80 Barclay Avenue
Flushing, NY 11362

Telephone: FL9-6676

Principal: Jerome Rosovsky

Junior High School Mathematics

Grades 7 and 8

Project Synergy

The Program

Project Synergy is part of the regular mathematics, science and art programs. The program, based on Piagetian principles of intellectual development, was designed to teach abstract mathematical principles through three-dimensional model building. Students meet either two or five times a week (depending on art classes). The curriculum starts with an experimental investigation of synergetic geometry and applies these patterns in the natural, technological and artistic environments. There are lectures, followed by "hands-on" building activities, climaxing with the building of a full-scale geodesic dome. Suitable audio-visual materials and an extensive bibliography introduce students to outside thinkers and practitioners. Teachers meet weekly to plan curriculum and share observations of individual students. These meetings are essential to the team-teaching approach. Students keep logs which are read weekly. There are tests, occasional homework assignments, and work done in regular math and science classes.

The Students

Eighty seventh and eighth graders participate in Project Synergy. The students, representing all socioeconomic and ethnic groups, are above-average seventh graders and average eighth graders in achievement.

The Staff

The program was developed in 1977 by Gerry Segal, a teacher with a background in both mathematics and child development. His willingness to experiment outside the field of traditional mathematics led to the creation of Project Synergy. Science teacher Dennis Franco and art teachers Micki Rosen and Bill Grossman have also joined the team to seek ways to apply the learning to other fields. There are no paraprofessionals or volunteers. The school principal provides administrative support with appropriate schedules, financing, substitutes, and after-school time. Parents and the PTA have raised money for materials. The citywide Arts in General Education program also lends educational and artistic support.

Materials and Facilities

Project Synergy has a large classroom which was originally a metalworking shop—an ideal situation, but not necessary. No commercially made products are used other than simple building supplies like toothpicks, glue, cardboard, and marshmallows. If a geodesic dome is built, wood, hinges and screws are necessary. Audio-visual materials are available from public libraries and film companies, but these are not essential. Segal estimates that a teacher needs about $300 a year for supplies, including lumber for the dome.

Outside Resources

Trips to the Metropolitan Museum of Art and the Museum of Holography further the interdisciplinary approach. The High School Division of the Metropolitan works with the students to make connections between Islamic art and three-dimensional mathematics. A selected bibliography includes:

Fuller, R. Buckminster; Applewhite, E.J., and Loeb, A.L. *Synergetics*. Macmillan, 1975.
Ivins, William M. Jr. *Art and Geometry*. New York: Dover, 1964.
Holden, Allen. *Shapes, Space and Symmetry*. Columbia University Press.

A complete list is available from Segal. Daily lesson plans and teaching strategies for Project Synergy are available through the New York City Board of Education's Division of Curriculum and Instruction.

Overall Value

Segal believes that Project Synergy makes mathematics more accessible to students who have traditionally been scared away. Because it encourages manipulative activities, it is fun. Students quickly become more confident about understanding abstract ideas. Their new-found competency with concepts seems to help them in turn with basic arithmetic.

More Information

Gerry Segal and Dennis Franco
J.H.S. 167
220 East 76th Street
New York, NY 10021

Telephone: 535-8610
Principal: Bernice Frankenthaler

Junior High School Mathematics

Grades 7 through 9

Student Volunteer Tutoring

The Program

This is a mathematics program in which students learn by teaching. Student tutoring concentrates on remedial arithmetic and an algebraic order of operations. The student tutors teach equations, word problems and statistics. Individual attention is given to students who have problems dealing with concepts and/or the application of those concepts. The tutoring begins at the breakfast program. The tutor picks up his student (or students) in the cafeteria and escorts him (or them) to the tutoring room. No latecomers are permitted to attend. The duties of the student volunteer tutor include checking attendance, checking the homework of all subjects, explaining the math homework, doing remedial worksheets, checking the student's progress and assigning additional work when necessary. All homework comes from worksheets which offer the student reinforcement. Testing is developed from the examples on the worksheet. Program developer Darius Transky observes that many students have difficulties with mathematics and that a program is needed to provide additional help. Making tutors of students is an ingenious technique for addressing this problem. All program material is available for replication.

The Students

The Student Volunteer Tutoring program is comprised of 40 seventh, eighth and ninth graders who are above average in their levels of achievement. They meet five times a week. Each tutor has two or three students.

The Staff

Transky has been teaching for nine years. He was coach of a mathematics team that finished second in citywide competition and was also the recipient of a National Science Foundation scholarship in mathematics at Penn State. His program receives total support from his school's mathematics chairman and principal.

Materials and Facilities

Rexograph stencils, paper for running off material and general supplies such as progress folders for students, as well as attendance sheets for the tutors, are the principal materials needed. Standardized mathematics tests are given before and after tutoring to measure progress.

Outside Resources

None are needed.

Overall Value

"This program is a way of giving individual attention, beyond that received in remedial classes, to students who lack mathematical tools and skills," says Transky. "Both tutors and pupils of tutors receive higher grades and, significantly, not only in mathematics. Also, there are far fewer behavioral problems."

More Information

Darius H. Transky
Walt Whitman, I.S. 246K
72 Veronica Place
Brooklyn, NY 11226

Telephone: 282-5230

Principal: Aaron Friedman

The Program

This Marine Science program is an adaptation of the standard eighth-grade science curriculum. It tries to increase the students' awareness of their beach and littoral environments by making the curriculum more relevant and applicable to their daily lives and school work. The program depends on weekly visits to a local stream or other similar area where measurements and samples are taken, recorded and analyzed back in the classroom. The students (who should have some chemistry and biology) also collect animal and plant specimens and build aquaria in which these are placed. They can then observe and record the interdependence of the animals with their environment. During the past six years, the teachers have continually refined the program and can now teach the necessary chemistry, biology and earth science through Marine Science and the related activities. The program should run all year so that changes in the beach environment can be noted.

The Students

Two hundred students participated in this program during the 1978-79 school year. The program has been run with equal success for students in the same school who are above or below grade level in reading. The originating school happens to be in a part of Brooklyn (Marine Park) which is close to the water. About five percent of the students come from families where the parents are involved professionally with the sea, either as fishermen or charter boat people.

The Staff

The program was developed by Libby Banks in 1973. She is still involved, along with another teacher also trained in science. Some background in oceanography helps with this program, but the basic information needed is easily acquired. The two teachers have no paraprofessional or volunteer help, and although it would make the program easier to handle, it is not essential. Administrative support is needed, however, since double periods are required for weekly field trips.

Materials and Facilities

Ideally, proximity to a body of water or wetlands is advisable. If this is not the case, at least two large (100-gallon) salt water aquaria can be successfully utilized. Other necessary equipment includes thermometers, meter sticks, wading boots and collection nets. A scientific laboratory is also helpful, but not essential. There is no textbook which Banks can recommend, but general books on the natural environment have been found to suffice for reference and identification.

Outside Resources

Obviously, the real ocean is helpful, but Banks believes that all students enjoy and benefit from any increased awareness of the sea, and variations can be made accordingly. Banks suggests that the New York Aquarium and/or the American Museum of Natural History be utilized for their fine marine departments. She also suggests that the materials from the New York State Marine Science Teaching Association be used. The United States and New York State Sea Grant Program is also a valuable resource for the teacher. A selected bibliography includes:

Underwater Naturalist, bulletin of the American Littoral Society, Sandy Hook, Highlands, NJ.
Coastlines. New York State Sea Grant. Cornell University.

Overall Value

This particular science program is a very active one, allowing for direct student participation and, therefore, easier and more efficient learning. The students like the beach, so they are more receptive to science in this pleasing context. "And, frankly," says Banks, "getting the kids out of the classroom and still having them learn makes it easier and more enjoyable for everyone."

More Information

Libby Banks
Marine Park Junior High School
1925 Stuart Street
Brooklyn, NY 11229

Telephone: 375-3530

Principal: Pearl Newman

Junior High School Science

Grades 7 through 9

The Use of Discards to Teach Science

The Program

This is a science program which uses recycled materials to help teach science within the existing curriculum. It encourages students to observe, collect and bring to class throwaway items found in vacant lots, on streets, in trash dumps and at home, in the tradition of sculptors who use "found" material in their work. Students develop a creative consciousness as well as a feeling for materials, according to program originators Joseph Eaione and Jay Kahn. Examples of projects include altering discarded plastic bottles into terraria in which students can observe the interaction of seeds with water and sunshine; turning wire coat hangers into test tube holders; and fashioning tunafish cans into electroscopes. Say the authors: "Hopefully, this will lead to further investigation and exploration by the student, for he has now been exposed to the versatility of relevant items which are readily obtainable." The two men have written a paper, "Recycling Technology for Classroom Use," which contains illustrated lesson plans as well as a long list of useful discards which is available upon request.

The Students

This program is appropriate for students with difficulties relating to achievement experiences as well as for the sophisticated, gifted student. The classes average 32 students and meet once a week. In addition, the authors give an extracurricular, in-service course to their fellow teachers as well.

The Staff

In the laboratory and classroom, one teacher can successfully implement this program. However, a two-person operation is needed to teach teachers. Eaione and Kahn, with eight and 13 years' teaching experience, respectively, have worked with their principal in taking the program to other districts.

Materials and Facilities

The motivating force behind this program was the lack of adequate funding for school supplies. Most of the materials are found on the street, brought into class (hopefully in a clean, undamaged condition) and worked into projects which are often continued at home.

Outside Resources

Discarded materials.

Overall Value

Say authors Eaione and Kahn: "This program is successful because of student involvement. Parents commend us on how much fun their children have in developing their new junk materials. Parents are also amazed at how much the children teach them. Attendance during workshop lab days improve as do classwork marks. Children eagerly anticipate the next project. Some even bring in discarded junk from home and ask us what could we make out of it. It is our contention that by recycling these 'educational discards,' our society, through our children, will no longer become a throwaway culture, but one of practical individuals, sensitive to all matter and more aware of making environmentally sound decisions in life."

More Information

Joseph Eaione and Jay Kahn
W. Arthur Cunningham J.H.S. 234
1875 East 17th Street
Brooklyn, NY 11229

Telephone: 645-1334

Principal: Isodore Karbel

"Working directly with aerospace materials is a giant leap for the inner-city child. It gives him a chance to see where he fits into the future."

Brian Withers, Teacher
John Adams High School

High School

"Aerospace Technology and Modern Sculpture," workshop at the Museum of Modern Art
Photo: John Nolan

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High School Art

Grade 10

Law-Related Art

The Program

Law-related Art is currently part of a special law education program and fulfills the secondary school art requirements while focusing students on various aspects of the law. Program developer Dr. Harriet F. Eisenberg wishes to extend Law-related Art to include an emphasis on ethics education for students in non-specialized basic required art classes. Students receive basic training in such traditional art skills as portraiture, figure drawing, painting, poster making and cartooning. They then choose a specific law-related subject. The art work may involve sketches of wanted criminals (similar to police posters) courtroom scenes, cartoons and drawings illustrating moral dilemmas, as well as posters on law-related themes. Material is available for replication in limited quantities.

The Students

The program is presently taught in the 10th grade only, although it is suitable for ninth grade as well, and could well be a required art course at any grade level. The 10th-grade multi-ethnic class consists of 34 students and meets five times a week. Reading is generally at grade level.

The Staff

The Law-related Art program originated with Dr. Eisenberg, assistant principal Sylvia Corwin and law-related education programs coordinator James Sullivan. Dr. Eisenberg is the demonstration teacher in Reading Improvement through Art at Kennedy High School and is currently the only teacher of Law-related Art. She has 25 years' teaching experience in addition to many years as a working artist, including eight one-woman shows.

Materials and Facilities

Standard art materials and magic markers are the basic tools. No special facilities are needed.

Outside Resources

No outside resources are necessary.

Overall Value

The program develops and strengthens the student's power of perception. "In order to draw a real object in a non-abstract way," says Dr. Eisenberg, "the student must first see that object. The program gives the student a solid beginning experience in the visual arts in addition to a creative, intellectual environment wherein concepts and standards of ethics and morality can be expressed through the written word, the spoken word and through works of art. In effect, art becomes a tool for visualized thinking."

More Information

Dr. Harriet F. Eisenberg
John F. Kennedy High School
99 Terrace View Avenue
Bronx, NY 10463

Telephone: 562-5504

Principal: Robert Mastruzzi

High School Art, Science and Mathematics

Grade 9 Introduction to Aerospace Technology and Modern Sculpture (ATAMS)

The Program

The objective of ATAMS is to bring "ingenuity, mobility, the concept of flight, and aerospace materials into the classroom," says program originator Brian Withers. Students are introduced to aerospace art through the application of inexpensive, light-weight materials to sculpture. They learn about such related areas as the history and technology of flight, astronomy, techniques of aircraft fabrication, the uses of different light-weight materials and the recycling of aluminum. They concentrate their energy and talents on building attractive three-dimensional artifacts.

The Students

Three ninth-grade classes per term, or approximately 110 average students from mixed background, participate in this required introductory art course. The program is equally applicable to junior and senior high schools.

The Staff

Brian Withers is ATAM's designer and implementer. In 1975 he was asked to document Alexander Calder's largest mobile, which represents the introduction of aerospace technology to modern sculpture and hangs in the new East Wing of the National Gallery of Art in Washington. His photographs have been accepted by various museums, WNET and one foreign university. He has also documented various works of Frank Stella and Ellsworth Kelly made with aerospace materials. This documentation is available to students and teachers.

Materials and Facilities

The basic material needed is aluminum honeycomb core. Ten large four-by-eight foot sheets would easily supply 30 schools. Other necessities include Mylar space blankets, adhesive glue, fishline, hooks and balloons.

Outside Resources

None are needed. A selected bibliography includes:

Armstrong, Craven, Feder, Haskell, Krauss, Robbins and Tucker. *Two Hundred Years of American Sculpture*. New York: Whitney Museum of American Art, 1976.

Arnason, H.H. *Calder*, Princeton, NJ: Van Nostrand, 1969.

Rubin, William. *Frank Stella: The Indian Bird Maquettes*. New York: The Museum of Modern Art, 1979.

Federal Aviation Regulations: Part 101, "Moored Balloons, Kites, Unmanned Rockets, and Unmanned Free Balloons," March, 1974.

Overall Value

"Working directly with aerospace materials is a giant leap for the underachiever and the inner-city child," says Withers. "It gives him a chance to see where he fits into the future." Besides kindling a curiosity about flight, outer space, science, mathematics, astronomy, art and life, the program demonstrates the essential elements of flight to students who have seen it on television or experienced it but never understood it.

More Information

Brian Withers
John Adams High School (Annex)
180-10 109th Avenue
South Ozone Park, NY 11420

Telephone: 848-7600

Principal: Louis G. Acerra

High School Cosmetology Program

Grades 11 and 12

Cosmetology Services for Senior Citizens

The Program

This is an "outreach" program for juniors and seniors that combines learning cosmetology and its practical application on neighborhood senior citizens. The program was initially developed by Otto Konigsberg, assistant principal in charge of the cosmetology program. Frustrated by the lack of mannequins and eager to provide his students with real-life work experience, he organized visits to senior citizens day programs where the students could service the elderly. This idea soon gained unexpected proportions and rewards. One day a week the three-hour shop is held in local senior citizen day programs. The students, in groups of 25, visit the center and cut, wash and set hair, and give facials and manicures to any senior citizen who desires it. Appointments are also made for senior citizens to come to the school for more complicated chemical treatments given by the seniors, whose final year is spent learning the more difficult processes. This outreach program not only provides the students with real-life experience, it adds to their 1000-hour supervised apprenticeship needed for state certification.

The Students

Two hundred juniors and seniors participate in this cosmetology program, a vocational program in a large (2650-student) comprehensive high school. Students throughout Brooklyn interested in cosmetology may apply. They are screened according to the Board of Education's guidelines for magnet programs. The multi-ethnic students are both males and females, with reading scores ranging from below to above average. All juniors and seniors enrolled in the cosmetology program have four shop periods a day. The program has grown in the last four years from 400 to 750 students.

The Staff

There are presently six teachers involved in this outreach program, including Konigsberg. All of them are accredited cosmetology teachers, while Konigsberg also is a licensed assistant principal, guidance counselor, and has a masters degree in psychology. The principal of the school is very supportive.

Materials and Facilities

Basically, any school already teaching cosmetology can organize this program. Senior citizen centers have the basic necessities (chairs, running water, etc.) to make student visits worthwhile to everyone. The program requires a good deal of administrative liaison work, and someone able to handle this. Additional materials are minimal. Konigsberg feels strongly that since the visits can be a valuable part of the students' learning process, the school should pay for the expendable materials.

Outside Resources

The senior citizen centers are the main outside resources. But participating students and teachers also visit junior high schools to demonstrate various skills in career-awareness classes. Konigsberg recommends a number of books: *The Standard Textbook of Cosmetology, Chemistry in Your Beauty Shop, Hair Structure and Chemistry Simplified* (all from Milady Publishing Co., Bronx, NY). Also, there are some good trade publications (*American Hairdresser* and *Beauty World and Salon News*) and general magazines (*Ebony, Vogue* and *Seventeen*).

Overall Value

The students learn poise and politeness when working with adults in settings other than home and school. They also learn some of the basics of professionalism—being on time for appointments, skill improvement, charm, ethics. The students often get weekend jobs, some earning up to $80 a weekend. However, says Konigsberg, the real benefit comes from watching the students and senior citizens learn to like and respect one another, as each responds personally and professionally. "Average kids flower when they see the old people welcome them so graciously. It does wonders for their sense of self."

More Information

Otto Konigsberg
Sarah J. Hale High School
345 Dean Street
Brooklyn, NY 11217

Telephone: 855-2412 Ext. 25

Principal: Bernard Wolinez

High School Career-Exploration Counseling

Grades 9 through 12

Community Apprenticeship Program

The Program

The Community Apprenticeship Program is a remedial program designed to help students with truancy, absentee, drug and emotional problems get back in the mainstream. Students with these problems are referred to program originator Esther Reichman by the school's counseling staff, the police, teachers or the administration. She interviews students and gives them four forms to be filled out: (1) a letter requiring the parent to agree to allow the student into the program; (2) a performance contract in which the student indicates willingness to work at a certain site; (3) an evaluation containing a description of what's required of the student; and (4) a letter to the agency introducing the student. Once the student understands the program, the counseling office assigns him or her to four periods of majors, one period of lunch and three periods of work. (The group of students is divided so that one-half works mornings and the other half afternoons.) The program is set up on a four-day schedule. On the fifth day, the students meet for group counseling with Reichman, instead of going to work. No student is allowed more than six absences a marking period. No student is allowed to participate in the program for more than two terms.

The Students

Each term, about 37 high school students in grades nine through 12 participate in this program. They are students from black and Hispanic backgrounds. Most of them have a history of truancy or excessive absenteeism.

The Staff

Reichman, coordinator of the SPARK Drug Abuse Program at Sarah J. Hale High School, developed this program to help troubled youngsters find goals for themselves, and thus become less susceptible to drugs. She has the full support of her principal, as well as the cooperation of the counseling staff, teachers, administration and outside agencies.

Materials and Facilities

Duplicating machines, stencils and paper are needed, as well as a phone to contact parents and community agencies. Reichman also uses a car to visit up to 14 different agencies each marking period.

Outside Resources

Community agencies can include hospitals, senior-citizen homes and daycare centers. The Human Resources Administration reimburses students for carfare.

Overall Value

The program has been in existence for three semesters, and its success rate is a high 80 percent. School classroom attendance—the main reason for setting up the program—has improved tremendously. Many students have developed career goals, learned to cope with some of their problems, made strong friendships and improved academically. The program has helped them find a direction for themselves, and many return to school to get the education necessary to attain these new goals.

More Information

Esther Reichman
Sarah J. Hale High School
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Principal: Bernard Wolinez

High School Equivalency Preparation

Grade 12

Mini-School Equivalency Program

The Program

This program prepares students for the high school equivalency examination and diploma. Within the framework of a five-period day (four periods of high school equivalency preparation and one elective skills class), problem students (truants, drop-outs and absentees) are prepared for the equivalency examination. Classroom work is both teacher-directed and individual and remedial work is available for those students deficient in basic skills. In addition, individual and group counseling is used to assist students in developing positive self-images. About two-and-a-half periods a week are used for the career education portion of the equivalency program. Several of the United States Office of Education occupational career clusters are specifically emphasized throughout the term. Overall, the program is designed as preparation for the high school equivalency examination and the GED diploma. The students are programmed for four periods of high school equivalency preparation with the same teacher in addition to an elective in a career-oriented class. This enables the teacher to know each student on a one-to-one basis, thereby allowing for flexibility in approach. There is no standard grading of students. Rather, a progress sheet with a personal evaluation is used for each student. The sheet is signed and returned by the parent. The key in this program is parent involvement and awareness. If a student is absent, parents are immediately notified. The materials for the career education component are teacher developed and can be borrowed from the Board of Education units or purchased.

The Students

These are students who should have been in their fourth year of high school. Generally, they are 17 or older, and reflect all levels of ability. The racial mix constantly changes and reflects the school population. There are 76 students iin the program, 60 of whom were at the 12th-grade level, with the remainder at the 10th- and 11th-grade level.

The Staff

This program is the work of three people. Principal Alan Irgang conceived of and implemented it. Judith Berger and Patricia Hermann, both teachers with 15 years' experience in guidance counseling and administration, coordinate and teach it. In practice, the program requires a counselor and/or grade advisor, home-room teacher and equivalency teachers, although one teacher can satisfy all the demands. Irgang chose staff members who, in turn, developed course outlines, curriculum materials and guidance-related materials and activities.

Materials and Facilities

A method of duplicating materials is needed.

Outside Resources

High school equivalency preparation books are needed, e.g., *How to Prepare for the H.S.E. Examination* (revised), Barron's Educational Series, Inc. Guidance materials include ITED and Career Interest Survey. Other source books include the *Occupational Outlook Handbook*, college, vocational and technical school handbooks, and subscriptions to *Career World*. A complete curriculum is available from Berger or Hermann.

Overall Value

The program attracts and keeps many truants in school. Attendance in this program is usually better than the average high school class. Students develop a positive attitude towards post-secondary education and careers, as measured by the number of college applications and job interviews.

More Information

Judith Berger and Patricia Hermann
F.D.R. High School
5800 20th AVenue
Brooklyn, NY 11204

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Principal: Alan Irgang

High School English

Grade 9

Rimes

The Program

This is a two-week unit devoted to an in-depth study of Coleridge's "The Rime of the Ancient Mariner." The unit is designed to be used within the regular ninth-grade English curriculum. It examines not only the style and substance of the poem, but also uses the material as a springboard for personal discovery and self-expression. Topics such as superstition, fear, good and evil are used to initiate discussion, observation and written assignments. The key to this program is the in-depth study of a single piece of literature as it relates to the self. The program aims to improve reading by teaching students to identify such literary devices as imagery, alliteration and allegory. The student learns skills that relate the poem to his or her world. Application of these concepts to a film, theatre and creative writing, as well as listening and speaking skills, is also taught. A complete set of lesson plans have been developed and are available.

The Students

The program is adaptable to any ninth-grade class, according to Carmela Chirico, its creator. Her ideal class would consist of 25 to 30 students. Scholastic ability of the students range from average to slow, with varying degrees of depth and detail designed for the particular grade level. A variation of the program has been used successfully with enriched and advanced students. Success is measured by a student's positive response to and involvement with the lessons and the material.

The Staff

This is essentially a program developed by three people: Chirico prepared the lessons; a researcher prepared library and audio-visual materials for student research as well as writing specific sections of the lesson plans; and the chairperson of the English department edited the lessons.

Materials and Facilities

Chirico uses a reading of the poem by Welsh actor Richard Burton. She also suggests using the Bard Book, *Rime of the Ancient Mariner: A Great English Poetic Work,* by Samuel Taylor Coleridge, published by Avon Book Co., Chicago, 1967. Filmstrips which illustrate the text may also be used.

Outside Resources

None are needed.

Overall Value

The program stimulates self-evaluation. It is also designed to make students perceive literature, not only as an art form to be appreciated but also as a way towards general self-improvement. "My approach," says Chirico, "is to use personal values and examine human motives. The student can appreciate classical poetry and improve his or her vocabulary because of the scope of the work. Larger issues become equally significant. For example, there have been discussions of gratuitous and passive evil in society. The studies and subsequent discussions are meant to make students learn who they are. And, the teachers themselves have been re-energized by their students' involvement."

More Information

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Samuel J. Tilden High School
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Brooklyn, NY 11203

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Principal: Everett Kerner

High School Remedial English

Grade 11

Parents as Learning Partners

The Program

The goal of Parents as Learning Partners is twofold: (1) to improve basic writing skills and (2) to combat the passivity of underachieving students by involving their parents in the ongoing learning process. The program supplements and enriches the regular 11th-grade non-regents remedial English course. Program originator Esther Davidson begins the parent involvement with the students interviewing their parents and writing up their ideas of what a solid English course should contain. These views are integrated in many ways, and the dialogue is sustained throughout the year. Homework assignments often contain a letter to the parent, requesting their opinions and reflections. As the parents begin to take a more active role in the education of their children (without being police agents), there is a marked difference in the students' own attitudes. Last year, a class newsletter was written and distributed to parents. A local newspaper sent a correspondent to the class to speak about journalism. Two students were commissioned to write an article about their program for the paper. This culminated in an end-term reception in which parents came to meet the teacher and the other students.

The Students

There are 70 11th graders in this new remedial English course. The students come from diverse ethnic backgrounds and economic levels, but all score three to five years below grade level in reading and writing. The class is held five times a week.

The Staff

Davidson, an English teacher with experience in teaching remedial reading and writing on the college level, developed this program during the 1979 school year. She taught the class alone, with no paraprofessional or volunteer help. Davidson has the support of her principal, but active administrative aid is not necessary. She maintains that, although she has tried this program only with slow learners, the basic premise has validity for all students.

Materials and Facilities

No special materials or books are needed. However, if a teacher wants to attempt a newsletter or newspaper, equipment more sophisticated than regular school mimeo machines could well be used.

Outside Resources

Davidson feels that the connection with the local community newspaper is an important aspect of her program and recommends it to other teachers.

Overall Value

When parents are involved in the education of their children in an active and sincere way, the teacher gains an important ally. Students also need and like that involvement. Davidson discovered that the students began to talk more, and that has increased their verbal skills and improved their writing skills. She also discovered that this act of reaching out to parents increases everyone's good feelings about school.

More Information

Esther Davidson
Newtown High School
48-01 90th Street
Queens, NY 11373

Telephone: 592-4300

Principal: Joseph Weintraub

High School Non-Regents English

Grade 12

Real-Life English

The Program

The non-regents Real-Life English program consists of a series of three resource units stressing the use of langauge arts skills in "real life." Three vital areas are covered: going to college, making one's way around New York, and getting a job. In the college unit, the students become aware of colleges they can apply to, scholarships available, and vocational programs. They send away for bulletins, write letters, and read about and discuss the pros and cons of going to college. In "Biting into the Big Apple," the students use *Cue* magazine to decide where to go and what to see in New York. They write up their experiences, and even plan a New York weekend for a guest, complete with suitable activities and subway route. Using the yellow pages, they learn to get what they need in New York. They simulate urban problems, i.e., "The landlord didn't give me any heat," and write letters of complaint. The job unit is the most successful one. Students select "want" ads from the *New York Times.* They write letters and resumes and conduct interviews, dressing up for the occasion. Each unit can be dealt with separately. The program is easy to replicate, lending itself to numerous classes and age groups.

The Students

Three classes, or a total of 110 students, participate in this program for one period each day. The students are seniors of diverse backgrounds. Some are native New Yorkers with deficient reading and writing skills. But most of them are foreign students, of average and above average abilities, who lack facility in English.

The Staff

Barbara Elias developed this program after teaching high school English and English as a second language (ESL) classes for six years. "I was given free reign to meet the special needs of non-regents seniors," she says. Occasionally, another teacher plays "interviewer" in one of Elias' classes. But, on the whole, the program "operates" almost in a vacuum. Because of the new mainstreaming approach to teaching, non-regents English will be discontinued in this school. Elias, however, will use her program in her ESL classes.

Materials and Facilities

A cassette tape recorder is needed, as well as rexographed copies of pertinent articles, e.g., "The Fifty Most Lucrative Jobs of Tomorrow" by Joanne Alter, *Family Circle,* March 26, 1976. Other materials include *Cue* magazine and the *New York Times* classified ads section for each student, two copies of Studs Terkel's *Working* and *The Yellow Pages. Baron's Guide to College* is helpful, as are New York City subway maps.

Outside Resources

Field trips to the theater, to a college, or any place of interest in New York City are helpful.

Overall Value

Most of these students know virtually nothing about New York City or about obtaining a job. The program, therefore, fills a vital need. It has been extremely successful. The students have become motivated; they've put a lot of effort into their work. As a result, their writing, reading and speaking skills have improved. And they've learned important things about this vital area of their lives.

More Information

Barbara Elias
Long Island City High School
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Long Island City, NY 11101

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Principal: Laura Goldner

High School English

Grades 9 and 10

Writing Clinic and/or Writing Fundamentals

The Program

The Writing Clinic seeks to eliminate basic writing defects in our pupil population through writing movie scripts of up to 40 pages. The curriculum is based on scripts' "action sequences," which establish the syntactical difference between written and spoken language. This combination is the core of a movie script which lets the teacher focus on verb forms, agreement between subject and verb, and consistency of tense. "Shots" are designed in such a manner as to require students to exercise exacting control over their choice of subject. The program began in 1974 when developer Edward Fishman had a writing class made up of multi-national ESL students (Italian, Greek, Iranian, Chinese), a blind student, and other individuals in need of remediation. Their one common ground, he soon discovered, was a love for movies. To individualize instruction, a "workshop" approach was taken. The basic direction for writing a movie script was provided the students as quickly as possible by means of acetate projections, video tape, and a simple lexicon for camera set-up. Once the work on the script—at a minimum, a four-week task—was begun, the teacher was free to tutor students on a one-to-one basis. Script ideas are often drawn from students' own experiences.

The Students

In the Writing Clinc, ninth- and 10th-year students in the class run the gamut from above to below-average, including truants and deviant learners. Class size has always been at the maximum successful size of 34.

The Staff

The program was developed by Edward Fishman, who has a background in film. The basic information needed, however, is easily acquired, and any writing teacher without previous film experience is under no real handicap.

Materials and Facilities

An overhead projector and the means to screen five or six minutes of commercial film (16mm rental film or material videotaped from a television set) are the basic materials needed. A classroom seating arrangement that allows the teacher to sit beside any pupil is beneficial, as is the ability to shade windows when the projector is being used. Several firms publish shooting scripts of major films and such material is useful.

Outside Resources

Class trips to view current films or to visit studios currently in film production were never attempted. But they would provide students with excellent ancillary learning experiences if they could be arranged.

Overall Value

Working with students whose spoken idiom is predominately black English makes it essential to convert the verbal pattern into the standard written form. The syntactical tangles of all poor writers, whether ESL or native, diminish as well, given the constant drill and one-on-one instruction provided by this program. Fishman has found no other way to drill students in the requisites of our written language that offers such a degree of pleasure and self-attainment as the movie script form.

More Information

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August Martin High School
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Jamaica, NY 11434

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Principal: Dr. Lawrence Costello

High School English

Grade 11

Multi-Ethnic Approach to the Teaching of American Literature

The Program

Ethnic American Literature is an honors sixth-term English class that teaches literature by using works from different ethnic groups. Developer Eileen M.J. Lynch bases her program on the idea that the experiences of the past shape the ideologies and behavior of the present. "Each new group," she says, "not only revitalizes America, but also challenges America to develop yet another facet of culture, thought and freedom." The students divide themselves into committes by ethnicity, develop a reading list, with suggestions by the teacher, and seek out the material in the school and public libraries. "The main problem," Lynch observes, "is getting the authors, the books and the materials all together in the English classroom." Class lessons cover research techniques, note-taking, use of alternate sources, writing skills, using a bibliography and information exchange. This is followed by the evaluation of each work by the teacher and students. The literature read is from the 19th and 20th centuries and includes selected writings of native American, Hispanic-American (Puerto Rican, Mexican and Chicano), Eastern European, Jewish, Black-American, Chinese, Irish, Irish-American, Italian, Russian and Scandanavian authors.

The Students

In this program, 40 eleventh graders meet five times a week. The multi-ethnic representation of participating students will partly determine the choice of ethnic American literature to be studied. Students spend considerable time in committee meetings and doing individual research and reports, as well as classroom work.

The Staff

Lynch has been a teacher for over 20 years. Her program was the result of a UFT multi-ethnic program in which she functioned as chairperson of an Irish-American studies committee. Lynch has the cooperation of the school librarian, as well as the approval of her principal.

Materials and Facilities

Nothing special is needed.

Outside Resources

Individual research and reading at local public libraries is essential. School libraries usually have an ample collection of 19th- and 20th-century ethnic and American literature. Lynch recommends *Teaching Strategies for Ethnic Studies* by James Banks (Allyn & Bacon).

More Information

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Stuyvesant High School
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Principal: Gaspar Fabbricante

High School Remedial Reading

Grades 9 through 12

Students' Centennial Reader

The Program

The Students' Centennial Reader is a reading book, based exclusively on the 100-year history of Boys and Girls High School in Brooklyn. It is written on a 4.0-6.0 reading level, has 32 chapters, questions, an answer key and a glossary, and is used by the students in the school reading program. The prototype program was designed by Larry Tominberg, based on his book. It teaches reading through content that is more immediate and personal to the students than most material now in print. Routine diagnostic tests determine the appropriate time to introduce the text to each student. The reading program is individualized, and the text adds a personal and relevant dimension to the students' studies. The text itself is totally self-correcting. In writing the book, Tominberg used newspapers, school yearbooks and literary magazines, interviews, New York history books and other relevant material as the source for short pieces describing high points of the school's history. Chapters are used according to student's particular interests. There are plans for social studies teachers in the school to use the book in history courses. Students are not tested on the material which is used solely as a motivation tool.

The Students

Over 500 ninth through 12th grade students participate in the high school's reading program. The students, all black and Hispanic, are in the Title I program. They have been assigned to these classes because of low reading scores ranging from first to eighth grade level.

The Staff

Tominberg, now a staff development specialist with the High School Remediation Program, believes that it is the teacher, more than any other source, who can best assess student needs and who, in turn, creates the most appropriate material for classroom use. "Given time and energy," he says, "teachers can actually create their own textbooks." Tominberg has therefore written *Create Your Own School History Reader: A Teacher's Guide.* This publication shares with teachers the step-by-step procedures and short-cuts used in producing *The Students' Centennial Reader.*

Materials and Facilities

Tominberg emphasizes that once a historical text is written about the school in which the program is offered, no extra material or space is needed. This is a totally self-contained program. The only cost is incurred in the printing of the texts and, although individual copies are ideal, textbooks can be snared.

Outside Resources

Class trips are not an essential part of this program. However, in the course of researching each book, interesting local sites may be discovered which students might subsequently enjoy visiting.

Overall Value

Tominberg believes strongly that students who arrive in high school unable to read have a great built-in resistance to learning. Unless they are motivated by material which holds some personal interest, they are immediately turned off. Commercial materials often fail to answer this need, whereas a history book written in story form about their own school is a step in the right direction. Tominberg reports that it is the first time he has encountered remedial reading students stealing the text.

More Information

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High School Remediation/Title I Reading Division
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Brooklyn, NY 11201

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High School Spanish

Grades 9 through 12

Color-Tense Language Teaching

The Program

The Color-Tense program provides Spanish-language instruction through a color-coded visual system based on the sequence of the seven colors of the rainbow. This method deals specifically with verb tense ("the most difficult part of language learning," according to program developer Joseph Edelman), and can be applied to English, French, Italian, Portuguese, Russian and Latin. Students are shown a chart wherein each verb tense is identifiable by its solid, vertical column of color. "Imperfect" is green, "present" is yellow, "future" is orange, and so on. "Eighty percent of learning comes through the eyes," says Edelman. This enables students who have trouble conceptualizing tense to readily picture time on a flat surface across the line of sight, i.e., horizontally. In addition to his color chart, Edelman also uses show cards, colored chalk and other materials to facilitate identification of tense endings. "You can take any passage from a text," he says, "and write it out in the color-code on an illustration board to make verb tense and the reason for its use immediately clear." Knowledge of spectrum color sequence gained in Spanish class can also be used by students in science class. Students taking regents Spanish exams have been passing with very high grades. In 1978, 100 percent of Edelman's students passed the regents and the average grade was 90.

The Students

Five classes, or about 150 ninth through 12th graders, participate each semester. The multi-ethnic students have below-average achievement level, most with little or no knowledge of English. The program has been taught in junior high school and to adults and could be taught to a whole auditorium of students with the aid of an overhead projector and screen.

The Staff

Edelman, a Spanish teacher for 16 years, often implements his own program (copyright, 1964). His Color-Tense chart is also being used by teachers in English as a Second Language (ESL) and bilingual classes. Social studies, art and science classes can use it to strengthen learning in specific areas with cumulative results. Edelman has administrative support and feels that paraprofessionals are exceptionally useful in helping students individually.

Materials and Facilities

Any Spanish text is good. Also necessary to the program are black and colored markers, illustration boards, colored chalks and colored show cards (which can be made by students). An overhead projector with color acetates is very useful, especially in testing. Transparencies of Edelman's Color-Tense chart can be duplicated for teachers as can the Color-Tense synopsis wheel.

Outside Resources

Edelman frequently takes classes to the American Museum of Natural History. There, graphic representations of stratigraphic layering in trees and rocks help students understand time concepts. Two descriptive papers by Edelman are available on request. They are "The Color-Tense Language Teaching System" (*Hispania*, Vol. XLVIII, No. 4, December 1965) and "The Visible, Universal Structure of Linguistic Time."

Overall Value

"A better understanding of tense gives a better understanding of context, thus a help in general instruction," says Edelman. "Perhaps more importantly, these kids, because they are confined in space (their immediate neighborhoods), have poor time concepts. A large number of them hardly even think of the future." This system, claims its inventor, helps them expand their sense of future time and their own future possibilities within that concept.

More Information

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Taft High School
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Bronx, NY 10457

Telephone: CY3-7200

Principal: Lorraine Monroe (Acting)

High School Spanish

Grades 9 and 10

Non-Academic Spanish

The Program

This is a program in basic practical Spanish that is based on contract learning. As program originator Roberta Kaufman explains it, "This course in Spanish was conceived in the hope of reaching those students who were previously unable to achieve positive learning results within a structured Spanish Level I class." It was also designed for students who felt a foreign language might be either too difficult or too boring. The students work from units (as stipulated in their contract) and must complete each unit before going on with the program. The program emphasizes individual attention, the practical use of Spanish, game-playing, conversation, repetition within the lesson plan and frequent progress tests. In conversation, for example, the stress is on practical application items such as parts of the body, clothes, travel, street directions and health. As the course progresses, students are encouraged to help each other and there are incentives in the form of coupons worth points toward the final grade and satisfying the contract. Various projects are also used, such as reading Spanish newspapers and decorating the classroom in a Spanish motif. All material is available for replication.

The Students

These were ninth- and 10th-grade students, ranging in ability from average to below-average. The class began with 20 multi-ethnic students and subsequently grew to 34 students. There are now six full classes, meeting five times a week. The program is adaptable to grades four through 12.

The Staff

Kaufman has been teaching for 11 years. Currently, she is working both as a grade adviser and program coordinator. She developed the Non-academic Spanish program with the cooperation of the foreign language department and the reading coordinator. All were given encouragement and endorsements by the principal.

Materials and Facilities

Kaufman has written a two-volume workbook, *Let's Play Spanish*, that is suitable for three terms and which serves as a regent review book. The books can also be used by students who wish to study on their own. In addition, Spanish newspapers and materials dealing with custom, art and history are useful.

Outside Resources

No outside resources are used.

Overall Value

This program is a good indoctrination into the school for an incoming ninth grader, especially with its individualized attention from the teacher and, if necessary, from fellow students. The students speak Spanish and learn to work in groups. Reading scores have gone up, and Kaufman says that there was "not one case in three terms where students forgot their materials." As the students work toward the fulfillment of their contract, they learn a new language, history and cultural customs, as well as patience and good study habits.

More Information

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Bayside High School
32-08 32nd Avenue
Bayside, NY 11361

Telephone: 229-7600

Principal: Lester Speiser

High School Mathematics

Grades 10 and 11

Business Math

The Program

Business Math is a "learning system" for students who are confused or have difficulty with textbooks. Program originator Frank Finnel observes that many students simply will not open a textbook, much less study one. To correct this attitude, Finnel began teaching Business Math from his specially designed business forms. The students now refer to them as "sheets," unthreatening pages with blank spaces to be filled in in class or at home and corrected by the teacher. Topics include insurance, taxes, profit and loss, payrolls, commissions and mark-ups. Finnel explains, "The sheets are really business forms. Students read the instructions, do the computations and insert the answers. Instead of one 'big' problem, the elements of the problem are broken down and the students solve it step by step." Between 80 and 90 percent of his students return their homework sheets completed.

The Students

Finnel's program is designed for the 10th- and 11th-grade remedial students. Finnel says his program eliminates "the plague of the under-achieving class, or that of the student who tries to go ahead without understanding the current task because they have a full, threatening textbook in front of them." The program can easily be altered to deal with different levels of classroom learning. Classes average 34 students and meet five times a week.

The Staff

Finnel has been a teacher for 15 years and before that was in management with several industrial firms. In his Business Math program, he receives assistance from another business mathematics teacher and a curriculum developer. The program also has the enthusiastic support of the assistant principal/supervision in business education who suggests that other teachers become involved.

Materials and Facilities

A mimeograph machine, stencils and paper are the basic requirements. Finnel may also use tape cassettes to record instructions to other teachers.

Outside Resources

Finnel periodically consults with business firms to update business techniques and problem-solving devices and methodology.

Overall Value

This business-form-as-textbook approach encourages students to work by having them zero in on specific tasks. Its tightly structured format demands that questions and problems be responded to immediately. This, Finnel feels, gives students a real sense of achievement. Basically, the student has to fill out the form and the tests follow the forms. Finnel sees several advantages: The student learns how to take tests; reading comprehension can be improved; and, as each student's collection of sheets grows, a sense of order also develops which improves the overall learning process.

More Information

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Bayside High School
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Bayside, NY 11361

Telephone: BA9-7600

Principal: Lester Speiser

High School Mathematics and Art

Grades 9 through 12

M-artmatics

The Program

The double-period mathematics-art course (M-artmatics) teaches students to create designs using mathematical formulas. In the mathematics class, students learn the arithmetic and geometric theory needed to create designs and models. In the art class, they learn color theory, design composition, and basic drawing skills, and actually construct the mathematical designs and models. The course combines in a logical order many of the popular mathematics-art topics and is written for general mathematics students. Some of the highlights of the 20-week course include construction of an 8-by-12-inch, 45-point string ellipse, and such others as the starburst and atom designs; study of the British and metric systems of measurement; and the connection between modular arithmetic and string-design construction. Teachers interested in M-artmatics can obtain a description, including photographs, a daily lesson schedule, and a bibliography from its originator, Dr. Andrew Janovsky.

The Students

The number of students in the M-artmatics program ranges from 30 to 60, depending on the term. Most students are several years below grade level in arithmetic, and come from a variety of ethnic and economic backgrounds. The topics in the course can be taught to students at many levels of ability. Students who have records of failure or truancy in other areas of mathematics often excel in M-artmatics. Children as young as eight years have been able to create basic designs, and students taking calculus have been challenged by the mathematics involved in the more complex designs. Class size should be below 30 if only one teacher is in the room.

The Staff

Dr. Janovsky developed the program with the cooperation and support of his administration and teachers in the mathematics and art departments. The teachers, all with long experience in New York City schools, contribute many ideas to the program. Students who have taken the course in previous terms often act as assistants. The program can usually be implemented without support. However, if classes are large, additional help may be needed.

Materials and Facilities

Both mathematics and art classes meet in the same room. Space is needed to store the hammers, scissors, paper, push pins, wood, nails, contact paper and other art supplies. Teachers must have access to a ditto machine. But the program is flexible and can be simplified.

Outside Resources

Students have been encouraged to visit craft shows, but no class trips have been made.

Overall Value

The M-artmatics course has been successful because students can immediately apply the mathematics they have learned to the creation of designs which earn praise and admiration from teachers, parents and other students. Many students have also earned money selling their work. More importantly, most students improve one or more grade levels on standardized arithmetic tests at the end of one term.

More Information

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Telephone: 562-5500

Principal: Robert R. Mastruzzi

High School Mathematics

Grades 9 through 12

Peer-Mediated Instruction (PMI)

The Program

The PMI program's premise is substituting students for teachers on a one-to-one basis. The program is two-fold. One part of the course focuses on basic arithmetic skills for students in grades nine, 10 and 11 who have severe remedial problems. The other part is an algebra course which deals with students who are basically on grade level, or are at least ready for algebra. The fundamental principle of the PMI course is that students work better with their peers than with their teachers, and that they can learn from one another more efficiently and with less resistance. Therefore, the students are randomly paired with classmates each day to work at their individual rate from color-coded, sequential worksheets gathered in four books. The four basic arithmetic books cover addition-subtraction, multiplication-division, fractions, and percentages. Each student acts as "teacher" for half the class and as "student" for the other half. The "teachers" mark, on special study guides, the answers the students got right. These study guides serve as a record for student and teacher and also show the student exactly where to begin the following day. The students in the remedial program work from these books three times a week; the other two periods are devoted to group work and explanation. The algebra course works in the same way, although there are fewer books, and the students meet only three times a week.

The Students

Almost one-half of all the mathematics students in this inner-city high school participate in one of the two PMI courses. The school has a high truancy record and a high mobility record. Some of the students in the basic arithmetic PMI course score as low as 3.0. There are 35 students to a class (with at least 10 classes involved).

The Staff

The program was developed in 1973 by Patricia Laita and Nina Rita, mathematics and accounting teachers, respectively. They developed the program with the help of the Educational Development Corporation in Cambridge, MA. The program was eventually printed and distributed by EDC. The program has been institutionalized in Bushwick High School, and most teachers now use the course when assigned the slow students. There is no paraprofessional or volunteer aid, although such assistance is helpful if available. The teachers have received a great deal of support from the principal, who was instrumental in getting other teachers to use the program. Other schools in the City system are now using the course.

Materials and Facilities

It is ideal but not essential to be able to use the same classroom for all PMI classes, so that the books do not have to be transported around the school. The books and study guides are available through EDC or the Office of Curriculum Development at the New York City Board of Education. Supplementary materials may also be used, but are not necessary. Laita can provide any interested teacher with sample booklets, and she is willing to meet with anyone to explain the procedure more fully.

Outside Resources

None.

Overall Value

Laita does not maintain that she is able to produce miraculous improvement in her students (partly because she never starts with the same class that she ends with). But she does say that the students learn in an environment which is academically sound and encouraging of positive social interaction.

More Information

Patricia Laita
Bushwick High School
400 Irving Avenue
Brooklyn, NY 11227

Telephone: 381-7100

Principal: Leonard Gelber

High School Geometry and Art

Grades 9 through 12

Visual Thinking

The Program

Visual Thinking is an intuitive, experimental, interdisciplinary course which teaches geometry concepts through art applications. Its purpose is to prepare students for the kinds of questions that are on the SAT's, but not on the regents. In the program, students may investigate, for example, the relationships between angles, lines and curves, together with the properties of quadrilaterals. They can then translate their knowledge into design and color by spray painting wall and floor murals. Other projects may include making stained glass windows, mobiles, kaleidoscopes, or even a geodesic dome.

The Students

Fifteen students meet for double periods five times a week to receive credit in mathematics and art. These multi-ethnic students score 5.0 in mathematics and a little higher in reading and have very poor study skills. The school is a non-graded high school which relies on competencies and credits.

The Staff

Ann Mele, a mathematics teacher with an art background, developed this program in 1974 to make mathematics more palatable to youngsters. "I thought that if kids could see the value of geometry in everyday life and had a product they could take home, they might like it more." The course is team taught. Mele deals with the geometry aspect, and art teacher Eleanor Koffer translates those concepts into art applications. But the course can be taught by a mathematics teacher alone, says Mele, provided he or she has a strong art background and is both creative and familiar with creative publications. Since the program is radically different from a traditional course, administrative support, especially in a regular high school, is essential.

Materials and Facilities

"One can use anything and everything, depending on one's resources," says Mele. "I once used left-over lumber for curve stitching. All I needed was $25 worth of nails, spray paint and yarn; I brought my own hammer." More expensive projects might require silk screens, textile inks, palette knives, squeegees, Exacta knives, paper tape, good quality construction paper, some sort of hard surface for cutting (glass is best) and, of course, rulers, protractors and compasses. *The Creative Publications Catalogue* is needed so that the teacher can be in tune with art ideas and methods. *Creative Construction* and *Line Design* are two basic source books from Creative Publications. And, Dover Press offers good ideas for Islamic Art.

Outside Resources

The Metropolitan Museum of Art's High School Education Department has been very supportive, holding workshops and offering to send a consultant to work with the students in school once a week. Field trips to various commercial silk screening establishments have also been useful.

Overall Value

The youngsters in this program learn math while having fun. Consequently, their attitude toward mathematics changes. They no longer see it in a vacuum, and the punitive aspect is gone. The success rate—given educationally disadvantaged students—is much higher than with a straight geometry course. Most youngsters become so enthusiastic about the various projects that they do extra work, in addition to teaching their friends some of the things that they've learned.

More Information

Ann Mele
Park East High School
234 East 105th Street
New York, NY 10029

Telephone: 831-1517

Principal: Charles C. Scott

High School Science

Grades 11 and 12

Calculators for Disadvantaged Students

The Program

This program teaches below-average students the use of a simple pocket calculator. The student not only learns to use a calculator but also acquires the freedom and ability to study many areas of science despite a deficiency in mathematics. Program originator Gerry Ripple notes, "Calculators eliminate the students' problem of extensive arithmetic calculations, especially those requiring long division and square roots, and permit quantitative lab work to be done in physical science." In this program, the calculators are used in physics, practical chemistry and earth science. Problems of theft were eliminated by Ripple, who developed a carrying case with special slots for each machine. Students sign for a calculator on a line coinciding with each calculator's number. Thus, the carrying case immediately reveals if any instruments are missing.

The Students

The students are below-average juniors and seniors in high school.

The Staff

At Martin Van Buren High School, those involved in the program are three chemistry teachers, a physics teacher, an earth science teacher and a lab specialist. All are enthusiastic about the program, which was developed with the aid of a National Science Foundation grant. The program is designed to be administered by a single teacher.

Materials and Facilities

The standard equipment includes Texas Instrument TI-25 calculators and mounting trays.

Outside Resources

None are needed.

Overall Value

"Our students are inhibited," says Ripple. "They have a background of failure. The pocket calculator enables these students to simplify complex procedures. It also eliminates stress and gives them confidence in other areas. With this problem-solving tool, the student is freed to do lab work and calculations at the same time. They experience instant success when results appear on the calculator.

More Information

Gerry Ripple
Martin Van Buren High School
232nd Street and Hillside Avenue
Queens Village, NY 11427

Telephone: 776-4728

Principal: Murray Ostrin

High School Algebra

Grades 9 and 10

Probability and Statistics in Elementary Algebra

The Program

This Probability and Statistics program is designed to allow both students and teachers to strengthen or teach the basic skills of arithmetic while teaching algebra. All too often, a teacher's attempt to remediate the basic skills is frustrated by a poor attitude on the part of the students. This attitude stems from a recognition that the work is on an elementary level, while the students are, nominally, on a secondary level. They sometimes develop an attitude that the work is, somehow, beneath their dignity. The concepts of Probability and Statistics offer an interest-capturing method to teach and review the skills of addition, multiplication, subtraction and division. The content of the course is not recognized as remedial work by the students, although, in fact, it is a remedial arithmetic program. They do not perceive the work as previously taught arithmetic, but are motivated by the concepts of statistics and probability to work on the problems presented. The students work through units on permutations, Venn Diagrams and non-parametric statistics such as Chi-Square statistics. The work is designed as algebra (solving equations, evaluating formulas, operating on integers and fractions) through arithmetical operations. Teachers who have used the material over the past two years have reported favorably on the improvements in student performance and attitude towards work in mathematics.

The Students

Approximately 200 students participate in the program. The students are ninth and 10th graders selected for the class because of their lack of success in previous mathematics courses. Each student in the program is at least two years below grade level in both mathematics and reading. The classes are racially mixed, reflecting the population of the school as a whole. The program can be adapted as enrichment for seventh and eighth graders without any modification. With minor modifications (removing certain basic topics), the material can be used as enrichment for any high school mathematics group working at or above grade level.

The Staff

The program was developed by Dr. John J. Rodgers in 1978. It was first taught by Dr. Rodgers and four other mathematics teachers. Now, five teachers use the materials. The program fits into the ordinary scheme of high school programming. It can be implemented in any junior or senior high school with the approval of the administration. There are no major financial costs involved, either in the area of acquisition of supplies or in the area of personnel. Dr. Rodgers is available to others who might be interested in the program.

Materials and Facilities

The program is conducted in an ordinary classroom. No special facilities are needed. No extraordinary materials are required. However, since no one textbook contains the topics covered, the teacher must be prepared to duplicate class sets of activity sheets and notes throughout the course.

Outside Resources

All experiences, either in or out of the classroom, are potential sources for probability or statistics exercises. The class can discuss and work from data found in news stories, opinion polls or game strategies. If available, a large capacity calculator or computer may be utilized for demonstration purposes.

More Information

Dr. John J. Rodgers
Beach Channel High School
100-00 Beach Channel Drive
Rockaway Park, NY 11694

Telephone: 945-6900, Ext. 41

Principal: Robert L. Rappaport

High School Physical Education

Grades 9 through 12

Co-Ed Gymnastics

The Program

This special Co-Ed Gymnastics program is designed to Olympic standards as a satisfying athletic experience that complies with Title IX (Equal Opportunity for Women) and offers the same quality instruction to both boys and girls. At the beginning of the term, program designers Leslie Gurka and John Pellegrino recruit students for this unit from the regular gym class. For approximately 27 days, students meet five times a week for a 40-minute period. During this time they do warm-ups, learn new tumbling skills, work on the apparatus, evaluate their progress on a videotape monitor, and view film loops of famous gymnasts. Except for activities involving the apparatus, boys and girls work together, helping each other learn physical control and teamwork. The program follows the pattern established by the Olympics committee, and the students use the equipment performed upon by Olympic competitors. Part of the program's success is based upon the role of student group leaders who, having been specially trained for their responsibilities, serve as peer instructors, "spotting" the tumblers, assisting with the exercises on the parallel bars and balance beams, and generally showing novice gymnasts that it can be done.

The Students

One hundred boys and girls, about half of whom have no experience in gymnastics, participate in this special unit with the regular physical education class. The teachers recommend that students start in the ninth or 10th grade, but all ages are included in the program.

The Staff

Gurka and Pellegrino, licensed physical education teachers with a combined experience of 18 years, teach the unit together. Both were inspired by the television coverage of the 1976 Olympics gymnastic program and decided to share their enthusiasm with their students. Pellegrino has had considerable experience teaching gymnastics to boys and was sure that girls would benefit from a similar course. Both teachers have taken special coaching courses in gymnastics and periodically attend clinics to add to their skills. But they claim that their program requires no training beyond that usually offered to physical education teachers.

Materials and Facilities

The main requirement is a standard gymnasium equipped with the usual tumbling mats, parallel and uneven bars, balance beams, and pommel and vaulting horses. Videotape facilities are helpful as is a large wall mirror so students can see their mistakes and correct them.

Outside Resources

The program is self-contained, although student leaders may attend special clinics in gymnastics or shows at Madison Square Garden on their own. A selected bibliography includes:

Bedard, Irvin. *Gymnastics for Boys.* Chicago, IL: Follett Publications Co., 1962.

Machtel, Erna; and Loken, Newton C. *Girls' Gymnastics.* New York: Sterling Publishing Co., Inc., 1961.

The Board of Education's *Curriculum Guide for Physical Education* is valuable, according to Gurka and Pellegrino. A complete bibliography is available on request.

Overall Value

To implement Title IX, to provide a shared experience for boys and girls, to capitalize on the excitement that the Olympics can engender, to involve students in a healthy, satisfying and timely program—all these contribute to the decision to offer this unit. Both teachers remark upon the high attendance and "preparation" rates. "Students seem to find it easy to remember gym clothes when gymnastics is on their calendar," they claim.

More Information

Leslie Gurka and John Pellegrino
Forest Hills High School
67-01 110th Street
Forest Hills, NY

Telephone: 268-3137

Principal: Jack Groveman

High School Science

Grades 11 and 12

Tree

The Program

TREE (The Resource Center for Environmental Education) is a program taught under the auspices of the science department. The in-classroom work consists of training students in two major areas: environmental education and methods of elementary education, including child psychology. A multi-disciplinary curriculum and a peer group approach are used. The classroom environmental education lessons are conducted by Saul Borak, the program's originator, and a series of guest experts. Units on water field studies, water pollution and marshlands are conducted by rangers of the National Park Service. Indian heritage topics are led by members of the Museum of the American Indian. Consumerism is taught by a faculty member of Columbia University. Natural plants and classroom planting is taught by members of the Queens Botanical Garden staff. The communications unit is presented by a member of the school's English department. The neighborhood studies units are given by local neighborhood groups. The pre- and post-lesson discussions are led by Borak. Elementary education methods are taught by members of the Board of Education's Center for School Development. The school's child psychology instructor and the resident psychologist provide background information to the students. This training period is five months long, after which time the students, working in pairs, visit elementary schools in their district and conduct three-day lessons on their particular topic in fourth-grade classes. On the third day, a field trip is conducted by either the high school students or the Park Service. All material is available for replication.

The Students

These are above-average 11th- and 12th-grade students, specifically chosen and trained by Borak and members of the National Park Service. The multi-ethnic group consists of 40 students meeting five times a week, at the end of the school day.

The Staff

Borak has 12 years' teaching experience. The program, which he developed with personnel from the National Park Service, has received recognition by SNAP (Self-Help Neighborhhod Awards Program), as well as an award from the Presidential Advisory Council on the Environment. The implementation of TREE is a well-orchestrated team effort involving the assistant science principal, the guidance department, the program department and the principal, all of whom must screen and recommend students. Students must be programmed late in the day and be allowed to leave with excused absences, and are responsible for making up all work.

Materials and Facilities

The program requires arts and crafts supplies, paper, prints, kits, food supplies, fabrics, books and other assorted goods. Films, film strips and printed materials are also used.

Outside Resources

There are field trips to the elementary school in the district and field trips in conjunction with National Park Service personnel. Borak recommends a series of resource books under the collective title, *Open Doors* (20 West 40th Street, New York, NY 10018), which lists guest speakers and printed matter

Overall Value

TREE establishes student-to-student communication between the high school and neighborhood elementary schools. It involves the local community in the life of the school by working with parents, both in field trips and in the classroom. The program has proven successful on many levels. Grade levels and marks improve; students achieve a degree of maturity and responsibility commensurate with a college experience; and elementary students are motivated to continue work in the subject area.

More Information

Saul Borak
Franklin K. Lane High School
999 Jamaica Avenue
Brooklyn, NY 11208

Telephone: 647-2100

Principal: Kenneth Tewel

High School Science

Grades 10 through 12

Biological Science for Gifted and Talented Students

The Program

This three-year program for gifted and talented students is designed, according to originator Harvey Goodman, "to help students develop and carry out projects of their own choosing." The first year is devoted to biology laboratory techniques, scientific observation and the forming and testing of hypotheses through experimentation. The second year consists of research in biology and other scientific disciplines. Independent research within a hospital and/or college setting is also provided. The third year co-requisite subject is physics. Students submit a paper on their research project for the Westinghouse Science Talent Search Program. Elective courses in the biological sciences are also offered. These include advanced placement biology, genetics, ecology, marine biology, botany, zoology, human physiology and psychobiology. There are also student activity projects for elementary school workshops and a program for a teachers' workshop. All material is available for copying.

The Students

These multi-ethnic classes consist of up to 34 students who meet 10 times a week in five double periods. Because in part this is an independent study program, the class could meet for more than the five double periods a week.

The Staff

Goodman has 18 years' teaching experience as well as three years' experience as a supervisor. Currently, he is the assistant principal of the biology department. In developing the program, he received support from teachers in many related areas: science research, biology regents honors program, zoology, regents biology, botany, human physiology, ecology and biology. The program's extensive extracurricular activities, need of adequate supplies and programming of faculty and students necessitates an unusual degree of cooperation from the school principal.

Materials and Facilities

Well-equipped, spacious laboratories and adequate printing and visual aid equipment are all needed for a program of this size.

Outside Resources

There are field trips to hospitals, colleges (and laboratories connected with these institutions), science fairs and, when the occasion arises, participation in science contests.

Overall Value

"For the exceptional science student," says Goodman, "a milieu is provided wherein the young man or woman is encouraged and motivated to develop his or her talents. Proper research procedures are taught which enhance the student's special gifts and provide a solid groundwork for college and the professional world."

More Information

Harvey Goodman
Grover Cleveland High School
2127 Himrod Street
Ridgewood, NY 11237

Telephone: 381-9600

Principal: Myron L. Liebrader

High School Physics

Grades 9 through 12

Lasers

The Program

The object of the Laser program is to use a safe, low-power laser to teach and clarify basic scientific concepts. A science textbook alone can be boring, tedious and inadequate. For students with or without reading problems, scientific concepts and laws are sometimes incomprehensible on the printed page. The laser can illustrate many of these same phenomena in a dynamic way. For example, when used as an intensive beam of light, the laser is readily adapted to the study of optics, fiber optics, astronomy, and photography. Also, students can easily measure the index of refraction of gases and liquids with precision and develop skill at precisely measuring other natural phenomena.

The Students

The students are from the ninth through the 12th grades. Physics students are generally above average, although program developer Herb Gottlieb says that his Laser program is equally suited to average and below-average students. Regardless of age and intellectual level, students are immediately drawn to and fascinated by this novel instrument which, until recently, was only science fiction. Classes average just over 30 students, but laser demonstrations can be shown to audiences of several hundred at a time.

The Staff

The science department at Martin Van Buren High School now uses laser beams in physics, astronomy and general science courses. Gottlieb, a department chairman and an award-winning science teacher for 32 years, finds that any science teacher can perform basic laser demonstrations after a few minutes' practice.

Materials and Facilities

A partially darkened classroom, a laser and readily available accessories are the basic facilities needed. Accessories include lenses, mounts, reflectors, diffraction gratings, microscope slides and razor blades. Operating manuals and work sheets are easily obtained from laser manufacturers.

Outside Resources

The Museum of Holography in New York City is an excellent laser resource for both teachers and students. Gottlieb has authored *Experiments Using A Helium Neon Laser* (published by Metrologic Instruments, Inc., Bellmawr, NJ 08030), and *Laboratory Manual for the World of Physics* (Addison-Wesley, Reading, MA). These books give detailed instructions for more than 100 teacher demonstrations and student lab exercises involving lasers. In addition, Gottlieb has an extensive bibliography available on request.

Overall Value

"The laser beam becomes an important teaching tool which is both simple to use and comprehend," says Gottlieb. "At the same time, the laser has an intrinsic theatrical quality that can hold an audience spellbound." Gottlieb notes that a $200 laser "permits high school students to conduct experiments which formerly required thousands of dollars of precise apparatus."

More Information

Herbert Gottlieb
Martin Van Buren High School
232nd Street and Hillside Avenue
Queens Village, NY 11427

Telephone: 776-4728

Principal: Murray Ostrin

High School Science (Bioethics)

Grades 11 and 12

Bioethics in the Secondary School

The Program

Bioethics in the Secondary School provides an opportunity for high school students to explore bioethical issues with scientists and career people. Students are presented with four controversial bioethical topics such as cloning, euthanasia, laetrile and vitro fertilization. Each student selects one topic to research. They are instructed on how to use the library and community resources and are given guidelines on report format and writing. They are first asked to submit a list of references (e.g., journals and other sources), then an outline, and finally the actual paper plus an abstract for comment and discussion. Concurrently, a lecture series is given by experts in the four selected areas. The program culminates in a science forum in which community members (parents, school administrators, teachers, doctors, clergymen, college professors) join the students in student-run panels to discuss the four selected issues. On forum day, students serve as hosts, chairpersons, transcribers and recorders.

The Students

The participants in this program are three groups of advanced placement biology students from three different high schools. They include approximately 75 juniors and seniors of mixed backgrounds. Each group receives six periods of class instruction. The rest of the work is done by the individual student in preparation for the forum. The program is flexible and can be done with regents students from different schools or classes.

The Staff

Biology teachers Stephen Halpern of New Dorp High School and Vincent Cusimano of Susan Wagner High School originated the program three years ago and implement it today with Sister Albert Dougherty of St. Joseph Hill Academy, mostly after school hours. They have excellent administrative support, as well as support from the Staten Island Cooperative Continuum. Published articles by Cusimano and Halpern on the program include "Science Forum: A New Learning Experience" in *The American Biology Teacher* (March 1977) and a sequel, "Science Forum II: BioEthics" (April 1979). *Learning in New York* covered the Second Annual Science Forum in the 1978 May-June issue.

Materials and Facilities

Regular science classroom and library facilities are required for background instruction and individual preparation. A large space is needed for the actual forum. Necessary materials include paper, a typewriter and a duplicating machine.

Outside Resources

These include subscriptions to science periodicals, correspondence with people in the field, college libraries, and programs with special speakers. Students attend lectures at Wagner College and the Institute for Basic Research (Willowbrook) and visit hospitals to interview, for example, kidney transplant patients. A selected bibliography includes:

Reich, Warren T. (ed.) *Encyclopedia of Bioethics* (Vol. 1 to 4). New York: The Free Press, 1978.

Dasbach, Joseph M. *Science for Society: A Bibliography*. American Association for the Advancement of Science, 1972.

Walters, Leroy (ed.) *Bibliography of Bioethics*. Center for Bioethics, Kennedy Institute, Georgetown University; and Cale Research Co., 1974.

A full bibliography including the two articles by Cusimano and Halpern will be supplied on request.

Overall Value

"With a rapidly changing society, students are rarely asked to discuss among themselves the values and consequences of our technological advances," say Halpern and Cusimano. "There is a definite need for this. In fact, the National Association of Biology Teachers has, as part of their guidelines, a mandate for teachers to include such discussions in the classroom. Students who have participated in this program feel that it has 'changed their lives'." The program has the full endorsement of teachers, parents, and scientists, and it serves as an example to those students who are not in advanced placement classes.

More Information

Stephen J. Halpern
New Dorp High School
485 Clawson Street
Staten Island, NY 10306

Telephone: 987-6660

Principal: Abraham Baumel

High School Chemistry

Grades 9 through 12

Performance Evaluation of Chemistry Laboratory Skills

The Program

The program consists of the performance evaluation of the laboratory skills in the chemistry regents curriculum. Given during the 10th week of each term, the performance evaluation determines how well students have mastered specific lab skills acquired during their weekly investigations. It also develops a feedback mechanism for acquisition of measurement and data-processing skills. Specific tasks are set up at laboratory stations. Before entering the lab, students are given instructions and an answer sheet. They enter the lab (usually four at a time) and, on signal from the lab specialist, start Task A. They move to Task B on another signal and so on through to Task F. Each of the four stations with the same task have a "difference" in outcome to ensure validity of the instrument. The lab specialist has an answer key for each class. At the end of the test, the students deposit their answer sheet in a box and leave the lab. Program originator Lys Keneally Waltien has copies of a sample set of performance evaluations (i.e., task sheet, student answer sheet, instruction sheet, organization directions) for teachers wishing to use them.

The Students

All the chemistry students in the high school are tested twice during the year. They are mostly average students of different nationalities and ethnic backgrounds. This kind of performance evaluation can also be used in medical technology programs and with junior high school students.

The Staff

Waltien, who developed the performance evaluations, is a high school and college chemistry teacher. Winner of the Nichols Medal Award from the American Chemical Society, she has worked on several New York State Education Department chemistry projects. She is currently starting a new program in the school entitled, "Science for the Gifted." Implementing performance evaluations throughout requires the support of the chairperson, the department and a lab specialist to set up various tasks and monitor the students' progress.

Materials and Facilities

Duplicating materials are needed as are laboratory facilities. However, the program does not require any special equipment beyond that found in a regular school preparation area and working lab. The performance evaluation depends essentially on the tasks the teacher wishes to test.

Outside Resources

None are needed.

Overall Value

Chemistry students, Waltien says, spend roughly a third of their time in the lab, but there is usually no check on whether they have mastered the skills taught. The performance evaluation fills such a need. Students also derive satisfaction in their own performance. The program is a growth experience for the department as well, especially a learning experience for the teachers since they design the tasks. In short, it's a professional approach to laboratory instruction.

More Information

Lys Keneally Waltien
John Adams High School
101-01 Rockaway Boulevard
Ozone Park NY 11417

Telephone: VI3-8180

Principal: Louis G. Acerra

High School Biology (ESL)

Grades 9 through 11

Biology for Foreign Students

The Program

This program is an introduction to science consisting of three units: ecology (food relationships and cycles in nature), human life activities and the causes and prevention of heart disease. It is not meant to replace regular biology but to help students make the difficult transition from their native language to English. The results are several: they get a success experience in science, learn English while participating in class, receive science credit and an evaluation for science placement the following term. "I give them the regular text as supplementary work," says Louie. On the whole, the work is individualized, and some of the techniques are useful for any slow class with listening, speaking, reading or writing problems.

Thirty-five English as a Second Language (ESL) students participate in this program for one period daily. They are students who don't fit into a regular bilingual program, coming from, for example, Asia, the Near East, Greece, Haita, Italy. The class, which includes siblings and other family members, acommodates different age groups and abilities. They are all high school students who need science credit to graduate, and who have been in the United States for less than a year.

The Staff

June Louie, a teacher and grade advisor with 10 years' experience, developed this program. She teaches biology using an ESL rather than a bilingual approach. In the process, she requires the coordinated support and cooperation of the ESL department, the assistant principal of guidance, the biology department chairman and the principal.

Materials and Facilities

Regular high school biology materials are needed. It is important that such visual materials as models, charts, demonstrations and lab work be used each day to tie science concepts in with something concrete. Filmstrips are good, but not films, because the narrator tends to speak above the students' comprehension level. Foreign language dictionaries are required. Louie doesn't use a text but generates her own materials from mimeographed class notes and lab sheets, as well as Xeroxed passages from different sources.

Outside Resources

Outside resources include student magazines, generally on the elementary or junior high school level, and articles in newspapers and magazines.

Overall Value

ESL students have been neglected in the content areas. Usually, these classes are taught on a level above their understanding, while the textbooks are equally incomprehensible. Thus, they are generally passed by, getting audit credit instead of a numerical grade. This program steps in to deal with special needs. Of the entire class in the spring of 1979, all but three ESL students have been recommended for regular biology, physics, chemistry and earth science placement.

More Information

June Louie
John Bowne High School
63-25 Main Street
Flushing, NY 11367

Telephone: 263-1919

Principal: Dr. Ben Parsteck (acting)

High School Science

Grade 10

Non-Regents Earth Science

The Program

This year-long course is a non-regents earth science program for reading students two or more years below grade level. It emphasizes field trips and hands-on activities and de-emphasizes terminology and analysis. The year is divided into quarters, with four major units covered: Earth and the universe, Earth's atmosphere, Earth's changing crust and Earth's history and environment. Each unit involves numerous activities, among which are making "metamorphic rocks," "measuring" the size of the solar system, and dating events. Students use a textbook and are encouraged to read aloud and demonstrate their comprehension in various ways. The program, specifically designed for remedial students, is not a watered-down science program. Students take an exam during regents week, and the scores have increased steadily since the course's beginning.

The Students

There are presently 360 10th-grade students participating in this remedial program. The students come from a variety of ethnic backgrounds, but all are slow readers and underachievers. Although Beach Channel High School is a magnet school for oceanography students, most students attend because it is their neighborhood school. Many of these local students have special needs which must be dealt with through carefully designed courses of study.

The Staff

The program was initially requested by the principal for this student population, and it was developed in 1974 by Henry Silverstein, an earth science teacher for 19 years with a special affinity and understanding for underachieving students. There are now four fully licensed earth science teachers participating. The teachers enjoy the support of the principal and the science chairperson, and use the extensive resources of this unique school. Tailoring a similar program to a standard curriculum in a standard high school is both possible and feasible, if sufficient time for development is allowed and qualified teachers are available.

Materials and Facilities

Spaceship Earth: Earth Science, by Joseph Jackson and Edward Evans (Houghton Mifflin, 1973) is used as the textbook. It is a spin-off from the Earth Science Curriculum Project. The teachers recommend this text, but emphasize that one of the beauties of the program is its lack of expensive and sophisticated materials.

Outside Resources

Field trips, one key to this program, depend on the environs of each individual school. Beach Channel High School has a unique opportunity to use the natural resources of nearby beaches and Jamaica Bay for the program. However, Silverstein maintains that any standard science laboratory can be used and that any urban environment is rich in field-trip potential.

Overall Value

"There is a strong need for science programs designed to overcome pre-existing barriers to learning in poor readers and underachievers," says Silverstein. "Students who have had problems learning need to deal directly with materials. They need manipulative activities which de-emphasize traditional modes of learning. Although teachers are often hesitant about letting older students who have exhibited behaviorial problems handle materials and go on field trips, it is precisely these aspects of the program which make it successful."

More Information

Henry Silverstein
Beach Channel High School
100-00 Beach Channel Drive
Rockaway Park, NY 11694

Telephone: 945-6900

Principal: Robert Rappaport

High School Biology

Grades 11 and 12

Human Genetics

The Program

Human Genetics is a combination discussion and lab course. It offers a background in basic principles of genetics, with reference to how they apply to humans in both normal and abnormal conditions. "I try to have both theoretical and practical activities," says Madeline Simon, who originated the program. Students learn about the molecular basis of genetic disorders; they explore the social, ethical and moral problems involved in genetic decision making and in the diagnosis and treatment of human prenatal disorders; they do blood typing, chromosome and fruit fly studies; and they study their own pedigrees by consulting family members. The syllabus can be modified to meet the needs of individual students and situations. A class of non-college-oriented youngsters can, for example, focus on careers available in the field; on practicing decision-making skills, and on learning what to expect from their developing sexuality.

The Students

The participants in the first course were in two classes of 30 students each, comprised of both juniors and seniors from Bronx High School of Science. This group of above-average students had completed one year of regents biology. Each class met for five periods a week in two double and one single session to allow more time for lab work and discussion.

The Staff

The program's syllabus was designed and researched by Simon, a biology teacher trained to teach high school as well as college. A background in basic biology, genetics and mathematics is useful for this program. She implements the program with administrative support.

Materials and Facilities

Although Bronx High School of Science offers excellent science labs and equipment, any school can carry this program as it requires no special materials or facilities. Simon gave the course in a regular science lab shared by many other classes. There should be, however, some place to store such needed materials as slides, microscopes and glassware (available in any high school lab). Other materials include films or rental and testing reagents. Students are also required to read professional journals.

Outside Resources

Simon has also considered having outside genetic counselors as guest speakers, or having the students visit a genetics counseling center. Outside resources include television shows like *Nova*, and American Museum of Natural History exhibits. A selected bibliography includes:

Cavalli-Sforza, L.L. *Elements of Human Genetics.* Menlo Park, CA: W.A. Benjamin, Inc., 1977.
McKusick, Victor A. *Human Genetics.* Englewood Cliffs, NJ: Prentice-Hall, 1969.
Sturtevant, A.H. *A History of Genetics.* New York: Harper and Row, 1965.

A full bibliography is available on request.

Overall Value

Human genetics is a wide-open field, one with which any educated individual should become familiar. "For example, anyone who plans to become a parent needs to assess the risks of having an abnormal child," says Simon. "Besides, there are many career opportunities available, including genetic counseling, lab technician, teacher, science writer and medical social worker. In general, students are very intrested, because human genetics has both an intellectual and an emotional appeal."

More Information

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Bronx High School of Science
75 West 205th Street
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Telephone: CY5-0200

Principal: Milton Kopelman

High School Art and Science

Grades 11 and 12

Environmental Art

The Program

This program combines the study of ecology and art. It is conducted with the cooperation of Wave Hill, an environmental center in the Bronx. The class meets five times a week. In the spring, there are biweekly visits to Wave Hill, where the students are exposed to a variety of subjects related to the environment. The science portion of the program includes greenhouse, indoor and window box gardening; the study of flowers, wild green plants and their struggles to survive in polluted environs; observation of life in the desert; identification of birds, city animals and insects; weather watching and water testing; and familiarization with urban architecture and landscapes. The art section consists of sketching or painting subjects found in a natural setting, such as flowers, plants and animal life. Students even design stationery with a scientifically inspired logo. The course outline is available for replicating.

The Students

The program is intended for art majors in the 11th and 12th grades. There are about 20 multi-ethnic students in the class which meets five times a week. The course is adaptable to other grades, but there are block programming and scheduling problems due to the combination of field trips and art classes.

The Staff

The program was developed by Rose Villani, a teacher of environmental science at Kennedy High School, in conjunction with two environmental science specialists at Wave Hill. Presently, the program is conducted by Villani and Rosemarie Altomare. Villani has been a science teacher for seven years and Altomare has been an art teacher for 12. The assistant principals and the Arts and General Education Program encourage this interdisciplinary program.

Materials and Facilities

This combined art and science program requires a number of items. Included are expendable art supplies such as crayolas, various paints, broad-tip markers, artists bound sketch books, inks and paper. Several films are especially useful, including "A Desert Place" (WGBH-TV, Boston, distributed by Time-Life) and "Treasures of the Earth" (Syracuse University), and a series of four film strips on the life and work of artist and scientist John James Audubon (a Miller-Broady Production).

Outside Resources

For students at Kennedy High School, the program is dependent upon the biweekly field trips to Wave Hill, though it could be adapted in cooperation with other nature centers throughout the five boroughs.

Overall Value

Says Villani: "Students have made significant attitudinal changes as a result of their deeper awareness and concern for the environment. Student/community involvement has increased and students have actually participated in making the environment a better place to live."

More Information

Rose Villani
John F. Kennedy High School
99 Terrace View Avenue
Bronx, NY 10463

Telephone: 562-5500

Principal: Robert Mastruzzi

High School Biological and Physical Sciences

Grades 11 and 12

Limnology

The Program

Limnology is the study of fresh water systems. Students in this program maintain a 10-gallon aquarium as a miniature pond and study the biological, ecological and physical factors of ponds, lakes and streams throughout the school year. Also included in their studies are the chemical and geological influences of the fresh water systems. In the field, the students concentrate on a pond in the Fort Tilden-Breezy Point section of Gateway National Recreation Area where they collect and study aquatic insects, plants, micro-organisms and water samples.

The Students

Beach Channel High School, a magnet school in oceanography, is on a four-cycle-a-year system. Five classes totalling about 180 11th and 12th graders participate in each cycle. The students are of mixed backgrounds and of average to above-average ability.

The Staff

Stephen Yaeger is a biologist with 13 years' experience and a special interest in fresh water systems. Two years ago, he convinced his chairperson that limnology was an important field and should be included in the curriculum. Offered at first as a two-cycle course in biological and physical limnology, the program has evolved as a four-cycle program that includes geological and ecological studies. Yaeger has been teaching the program alone, but since it has expanded, there will soon be a second limnology teacher on staff.

Materials and Facilities

Needed are a regular high school lab, together with microscopes, slides, dissecting kits and field equipment (water test kits, collecting bottles, magnifying glasses, nets for fish and insects, and leaf presses). Space is needed in which to set up an aquarium (preferably the 10-gallon kind, although a two-gallon pickle jar is good enough). The water and organisms can be gotten from a nearby pond, biological supply store or local pet store. In some cases, an air pump may be needed.

Outside Resources

There are ponds in Central Park, Prospect Park, Staten Island's Clove Lakes Park, the Alley Pond Environmental Center, and Cypress Hills Cemetery as well as in many other locations in the metropolitan area.

The course text is R.E. Coker's *Streams, Lakes, Ponds* (Harper & Row, 1968). Also, field identification books are helpful (*Freshwater Ecology*, edited by William Andrews; *Field Book of Ponds and Streams*, by Anne H. Morgan; and *Freshwater Biology*, edited by W.T. Edmonson).

Overall Value

"Limnology is coming into its own because we are having more and more problems finding fresh water," says Yaeger. "We can't clean up polluted rivers before we can understand what they're all about. Most students do quite well with the course and its concepts. It's an elective. We never expected to have 183 students sign up for limnology for the 1979-80 school year. But they did."

More Information

Stephen S. Yaeger
Beach Channel High School
100-00 Beach Channel Drive
Rockaway Park, NY 11694

Telephone: 945-6900

Principal: Robert Rappaport

High School English, Social Studies, Music, Art

Grades 9 through 12

The Program

Humanities is an interdisciplinary high school program which emphasizes aesthetic appreciation while preparing students for English and American history regents and advanced placement. Typical humanities units deal with technology's impact on American society; aggression and the state; a comparison of the 1970's with previous decades; and women and the law. This unit explores sex role attitudes in literature and the arts, as well as history and government. Specific areas of women and the law include sex discrimination in employment, marriage and divorce, battered women and rape, and the Equal Rights Amendment and its implications. Program term papers include one on the arts, one on a history topic.

The Students

One freshman, and two sophomore, junior and senior classes participate in the program. The students range from average to above average in ability. In addition, the geographical placement of Jamaica High School assures a diverse ethnic composition. Classes meet for double periods each day to study at least four Humanities units in a year.

The Staff

The Humanities program was developed eight years ago by the principal, the head of the high school college and scholastic office, an English teacher and a social studies teacher, all of whom wrote the Curriculum Bulletin (PN 10033, September, 1976), *Forces, Creativity and Responses.* English teacher Barbara Brown and social studies teacher Dennis Young now implement it as team teachers. "We can divide the time any way we want. For example, if Barbara wants to work on writing skills, I can do something else, perhaps a historical overview of the unit," says Young. However, as originally designed, the program can be taught by either a social studies or English teacher, by an art or music teacher or any combination thereof.

Materials and Facilities

A large room with moveable furniture, audio-visual equipment and a piano (if possible) are needed.

Outside Resources

The program has received grants from the Lincoln Center Institute for the Performing Arts and the New York State Bar Association. Various organizations have sent speakers, including All the Queens Women, the National Organization for Women, the Police Department, the Fortune Society, the Legal Aid Society and other legal system organizations. The Museum of Modern Art, the Whitney Museum and the Metropolitan Museum of Art have also offered tours and seminars.

Overall Value

Humanities encourages students to see connections among disciplines while tapping their own talents and interests. The focus is primarily on learning how to think and reason. In addition, students gain an increased sense of worth and sensitivity to other people. "Students returning from college often give us encouraging feedback about the good preparation they've received," say Brown and Young.

More Information

Barbara Brown and Dennis Young
Jamaica High School
167-01 Gothic Drive
Jamaica, NY 11432

Telephone: RE9-5942

Principal: Arlene Zimney

High School Social Studies, English and Speech

Grades 10 through 12

Legal Studies

The Program

Legal Studies is a three-year program concentrating on law and government. The areas covered include criminal, juvenile and business law; federal, state and local government; world politics; and civil liberties and civil rights. There is an internship program for juniors and seniors which enables them to work with and observe assemblymen, lawyers, judges and congressmen. Students learn debating (which sharpens their reasoning abilities), library skills (such as research on law-related subjects) and reading and writing. The courses are taught on a nine-week-cycle basis. Program originator Bernadette Delphine notes that "they can be taught as mini-courses or combined in an 18-week term." Material available for replication includes the course outline, course description and simulation games. The program is adaptable for good-ability groups in junior high school.

The Students

The students are in the 10th, 11th and 12th grades. Each class has about 34 students. There is one social studies class and one English class per day. Most of the students are above average and applied for this program when still in grade school throughout all five boroughs. This citywide representation was the result of recruitment by staff representatives and high school students who carried the program to grade schools and junior high schools. A Board of Education booklet also describes the program.

The Staff

Delphine has 11 years' teaching experience. She received a fellowship from the Robert Taft Institute for Seminars in Government and developed Legal Studies under the direction of humanities assistant principal Sondra Nobel and implemented the program herself. The program represents the combined efforts of the social studies, English and speech departments and the cooperation of two assistant principals and one principal. The teachers are on cycles, as are the students. In the 10th grade, the students take one Legal Studies class per semester. In the 11th grade, they take two or three classes per semester. In the 12th grade, they take another two or three classes per semester. Legal Studies could be started with one social studies teacher and one English teacher. But it is preferable to have more staff members, with their own particular input and areas of expertise. There are so many areas of study under the broad umbrella of Legal Studies that faculty diversification is better for pupil and teacher alike.

Materials and Facilities

There is an emphasis on published materials, such as textbooks or magazines, especially for homework. In the classroom, there are such simulations (role-playing) as mock trials and debates. Professionals in the field are brought into the class where they speak to and interact with students. The classroom facility thus becomes an active, living place.

Outside Resources

There are field trips to courts, police headquarters, FBI headquarters (New York branch), City Hall and labor union offices (such as the UFT). Students attend a "model Congress" at Midwood High School and at Oceanside High School. This is a citywide student assembly. Students also enter the statewide mock trial contest, sponsored by the New York Bar Association and the State Education Department in Albany.

Overall Value

As Delphine says, "The major objective is to help students understand the rights and responsibilities of citizens in a democratic society. And these objectives are being achieved. Students are highly motivated, not only in the course work, but in the voluntary, extracurricular work."

More Information

Bernadette Delphine
Murray Bergtraum High School
for Business Careers
411 Pearl Street
New York, NY 10038

Telephone: 964-9610

Principal: Barbara L. Christen

High School Social Studies

Grades 9 through 12

Social Studies for Foreign Students

The Program

This is a program designed to familiarize newly arrived foreign students with the school community, the community outside the school and general American customs, history, government and culture. The approach is to review social studies skills through an introduction to the school itself. The students review map skills by making maps of the school area. They tour the school building, noting floor plans, room numbers and various services. They study diagrams of the school organization. Reading, writing and speaking skills are used for the historical study of New York City. Program originator Kathleen Grill uses a variety of devices: vocabulary lists, simple reading exercises in the form of essays, questions based on the essays, crossword puzzles, blackboard work and tests. The curriculum is designed to move at a slow pace, to explore the experience of culture shock, to explain American habits, to emphasize English reading, speaking and writing skills. Classroom work is individualized and students are singled out for special guidance.

The Students

The students represent a wide range of countries of origin, backgrounds, ability and grade levels. The common denominator is that they are recent arrivals to the United States. There are 30 students to a class, meeting once a day for one 45-minute period.

The Staff

Realizing that traditional social studies material was not adequate for in-coming foreign students, Grill set about developing and implementing her own program in 1968. She currently receives a great deal of help from assistant principals for guidance. Grill now works closely with the English as a Second Language staff. She has been teaching for 11 years.

Materials and Facilities

There are no books used in the course. The primary need is for lexigraph paper for reproducing elements from the learning package Grill developed. A tape recorder is also essential so that the students can hear themselves.

Outside Resources

Various trips about New York City are helpful. For example, the class went to the Queens Fair in Flushing Meadow Park to study customs, local history and American sports. Families of the students are invited on many of these field trips so that they can share the learning experience with their children. Other trips include the Statue of Liberty, the Empire State Building and important cultural and historical landmarks.

Overall Value

"This is a class for new Americans only," says Grill, "without the peer pressure that arises from a class including native-born Americans. The program is intended to bring out and encourage participation from students who tend to feel lost in an alien setting." The success of the program is characterized by an end-of-term activity in which students volunteer to get up and adddress the class in their newly acquired language.

More Information

Kathleen E. Grill
John Bowne High School
63-25 Main Street
Flushing, NY 11367

Telephone: 263-1919

Principal: Dr. Bennett Parstack

High School Social Studies

Grade 9

Ninth-Grade Orientation

The Program

This is an orientation program that introduces students to both the new concepts of high school and that of the world beyond. Ninth graders, fresh out of elementary or junior high school, are given a tour of the school and an explanation of its organizational structure. Showing them how the school functions reduces their awe of school by making the procedures more familiar. The new student is also introduced to the academic structure, its services and resources, through discussions led by teachers, grade advisors, guidance counselors and deans. Other topics covered are extracurricular activities (teams, clubs, societies) and students' rights and responsibilities. The orientation program, as part of the regular social studies course, focuses on history, economics, area studies and government. Along with the standard social studies curriculum, program originator Claire Goodman encourages the students to think and talk about themselves. This exercise in "values clarification" touches on self-analysis, social analysis, study habits, the success syndrome, careers and consumerism. Social studies includes the study of social behavior, with the school as a microcosm of society and the student as an individual within that society. Local, national and international history are included in this introductory course. All material is available for replication.

The Students

The multi-ethnic students are incoming ninth graders. The class consists of 30 students who meet five times a week. Specific units of the program can be adapted to other grades.

The Staff

Claire Goodman, who developed and now implements the program, has 12 years' teaching experience. Assistance is provided by student government, club and team members, guidance counselors, assistant principals, grade advisors and deans. Curriculum, resource materials and lesson plans were prepared by the faculty of the social studies department.

Materials and Facilities

Goodman uses such audio-visual material as the film strips "Why Social Studies," "How to Study," "Career Ed," "Success" and "Consumer Ed." Other materials include maps of New York City and its subways, and Duplicating Master books of map-reading and critical-thinking skills.

Outside Resources

Goodman is planning a walking tour of the neighborhood with visits to bakeries, banks and other neighborhood stores and discussions with merchants. A selected bibliography includes:

Linder, L. Bertram, and Edwin Selzer. *Youth and the Law*. New York: Oxford Press, 1977.

O'Connor, J.R., Gall, M., and Goldberg, M. *Exploring Urban New York*. New York: Globe, 1975.

Shapiro, J. *The Jobs Book: How to Find and Keep a Job*. New York: Scholastic Magazine, Inc., 1976.

Overall Value

This orientation program opens up new areas of thought and perception for students who start looking at themselves in their old and new environments, and are familiarized with career education, graduation requirements, national and international history. "This is what orientation is all about—and what social studies really means," says Goodman. "With real enthusiasm, a teacher can turn kids on to learning."

More Information

Claire Goodman
Theodore Roosevelt High School
500 East Fordham Road
Bronx, NY 10458

Telephone: CY5-3600

Principal: Phillip Lefton

Survival for Students

The Program

Survival for Students is a program designed to enable potential high school drop-outs to survive in New York City by learning various skills. The practical areas covered include job application training, law and citizens' rights, insurance (automobile, home and apartment ownership), filing of claims, sex education, the responsibilities of parenthood and advanced first aid. The program stresses the importance of each subject and the need for learning the particulars about it through lectures and demonstrations. The program deals not only with survival but also with such basics as vocabulary and adult behavior. There is a constant review of the material that develops learning and motivation, and improves the teacher-student relationship. Program originator William Henderson invites phone inquiries to discuss his program.

The Students

These are "the toughest kids in school," according to Henderson. They are 75 percent black and 25 percent Hispanic, and the classes of up to 10 students meet for 20 periods a week. They are all potential drop-outs, with very low reading levels. The program is fashioned similar to an elective so that some students attend twice weekly, some five times weekly, and so on, depending on schedules. The subject matter, geared to the slowest student's ability, is constantly adjusted. Students average 17 years of age, with a third-grade level.

The Staff

Henderson has been in special education for 16 years, 13 of which were spent at the Spofford Juvenile Detention Center, where he developed a successful student leadership program. Henderson was a high school drop-out and a part-time farmer, and returned to school to complete his academic studies and play varsity football. The program receives strong support from the school's principal.

Materials and Facilities

Henderson finds two books especially helpful. They are *You and the Law,* Henry Poor, editor (Readers Digest Association) and *Human Sexuality: A Course for Young Adults,* by James Leslie McCary (American Book Co.). A variety of job application forms are also useful in the course.

Outside Resources

None are needed.

Overall Value

"It takes time to build up students," says Henderson. "My program should be mandatory for low-level readers in the City system." Henderson's classes are the best attended in the school, and the graduation percent of his students continues to rise.

More Information

William M. Henderson
P.S. 58
Manhattan High School, District 75
317 West 52nd Street
New York, NY 10019

Telephone: 581-8735

Principal: Solly Walker

High School Social Studies

Grades 11 and 12

Values-Centered Curriculum

The Program

This "values" program is not content-oriented. It is more a process than a course, and is essentially group discussion and interaction on critical issues. It could be extended to any course materials, and owes its existence to the discussion and analysis of motives, attitudes, and choice options which are relevant to the class examination of minorities. Questions to which there are no right and wrong answers are posed to generate consideration of personal and social minority problems, on levels consistent with student needs, interest and experiences. Program originator Harvey Steinerman's rationale is "they don't have to love everyone, but they will have to live and work with others unlike themselves in a group situation. Why close off half the world?" He believes the school is one agency which can help teach appropriate behavior and values.

The Students

Steinerman is a social studies teacher whose focus is group relations and who attempts to teach values-recognition and decision-making within the framework of a sociology elective. A companion elective is the history of blacks in America. There is no additional staff help, but there is total support from the school principal and the chairperson of social studies. Parental feedback has also been supportive. Steinerman, who has been teaching for 23 years, feels that a teacher must be interested, caring, enthusiastic and non-judgmental for this program.

The Staff

Any textbook can be the foundation of the program. Relevant sections can be extrapolated, reproduced (with permission of the publisher) and distributed. Other effective aids include teacher-made and commercially prepared slides, cassettes, motion pictures, guest speakers, primary and secondary course documents, and current newspapers and magazines. Useful classroom procedures are anonymous questionnaires, selections from literature reflecting minority attitudes, "before and after" essays to evaluate attitudinal changes, role-playing and simulated situation techniques, and the conscious development of writing skills.

Materials and Facilities

Trips are difficult at this level because of logistics. However, conscious effort is also made to use resource people both inside and outside the school. A selected bibliography includes:

Galbraith, Ronald E., and T.M. Jones. *Moral Reasoning.* Minneapolis: Greenhaven Press, Inc., 1976.
Mattox, Beverly A. *Getting it Together.* San Diego: Pennant Press, 1975.
Raths, Louis E., M. Harmin, and S.B. Simon. *Values and Teaching.* Columbus: Charles E. Merrill Publishing Co., 1966.

Outside Resources

Steinerman believes that minority students have a particular need to develop a better self-image, and that building a program around the history of minorities can generate an understanding, appreciation, and respect for the values held by parents, peers, and other groups in our society. "In turn, this can reinforce our American values of education, work, honesty, thrift, and citizenship."

Overall Value

Harvey Steinerman is prepared to help all interested teachers adapt the principles inherent in this approach to their own classroom situation. He will share his teaching materials and the Values-centered Curriculum information on request.

More Information

Harvey Steinerman
Springfield Gardens High School
143-10 Springfield Boulevard
Springfield Gardens, NY 11413

Telephone: 341-3033, Ext. 18

Principal: Carl Golden

"The secret of success is for the teacher to utilize their [students'] abilities as opposed to dealing with their disabilities."

Stanley Nussbaum, Teacher
Grover Cleveland High School

Special Education

"**Aesthetic Enrichment** for the Blind and Handicapped,"
workshop at the Museum of Modern Art
Photo: John Nolan

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High School Fine Arts

Grades 9 through 12

Aesthetic Enrichment for the Blind and Handicapped

The Program

The program is designed to expose blind and handicapped students to arts and crafts and experiences from which they are normally excluded. In addition, students visit various museums which they are unlikely to visit on their own. The program met three times a week in 1978. The program is completely individualized and there are no curriculum guidelines. At present, two legally blind students are into photography, and one of them is a prize winner. Also, the class has expressed an interest in expanding into macrame and needlecraft. Curriculum in all these areas is now in the process of being completed.

The Students

The most recent class was comprised of 20 students who represented a random cross-sampling of economic and ethnic backgrounds, and whose one common factor was a handicap of some sort. They participated on a voluntary basis.

The Staff

Stanley Nussbaum, a Pratt Institute-trained fine arts teacher, first found himself sharing a stirring classroom experience with a blind child in 1965. He continues to work vigorously to "open doors" for such children. He conducts his program after the regular school day, with student aides assisting him in the classroom and on outside trips. Nussbaum acknowledges full support from the assistant principal in charge of guidance and the school principal. The prime requisite for teachers is the ability to recognize his or her gut feeling of compassion, and to resist the impulse to treat these youngsters, who have been "mainstreamed" and like it that way, as special cases again.

Materials and Facilities

Activities flow from student needs and interests, and materials are whatever is available or can be obtained. These include ceramics, Plexiglas, jewelry components, copper, stained glass, magic markers and the like. Nussbaum says that it would be helpful to have access to an elevator for the handicapped students.

Outside Resources

One objective of the program, Nussbaum explains, is to enable students to have the same art experiences non-handicapped youngsters have, to be, through art, part of the mainstream of the outer world. He has found the Museum of Modern Art most helpful and recommends contacting MOMA's director of education Myrna Martin. There are Braille guides to the art exhibits, and students are allowed "hands-on" contact with many works of art. The Whitney Museum is also outstandingly cooperative. The Metropolitan Museum of Art offers limited facilities and assistance. The Brooklyn Museum is another possible resource for the coming year. Nussbaum notes a sign of success: "Many of the children pick up free passes for return visits after their first trip."

Overall Value

"These children spend a greater than average amount of time alone, and exposure to craft areas may help them acquire productive ways of spending their time." Nussbaum notes that these students have great pride in visible accomplishments and can, in this program, "experience immediate gratification, unlike other areas where progress is less apparent."

Interested teachers can obtain background information, materials, charts, outline of methods and approach, brief sample lesson plans, and film strips or slides from:

More Information

Stanley Nussbaum
Grover Cleveland High School
2127 Himrod Street
Ridgewood, NY 11237

Telephone: 381-9600

Principal: Myron Liebrader

Special Education

Grades 4 through 6

Impulse Education

The Program

The objectives of Impulse Education are to channel students' negative impulses into pro-social, pro-learning experiences and to foster academic learning. Program originator John Cullen is a teacher of neurologically impaired youngsters in a program titled, "Health Conservation 30 (HC-30)." Impulse Education teaches young men and women to express, classify, act out and "act on" both good and bad impulses in a safe and helpful way. Cullen encourages several rap sessions a week and uses drama, music, creative writing, language and arts therapy techniques to draw out students' anti-social, "overly spontaneous," regressive and withdrawal impulses. Cullen explains, "I try to use situations that the youngsters bring up as a focal point. In revealing themselves to others, they hopefully gain insights into themselves, and their fellow students quite often identify with similar problems. Thus, the problem student feels less isolated." For example, a dependent student who is inhibited and anxious may attempt to withdraw from the classroom experience. Cullen will try to get the youngster to respond to certain kinds of verbal and social pressure. If there is no reaction, a rap session will follow. The main subject: pressure. As other students discuss their reactions to pressure, the withdrawn youngster will usually identify with one or more expressed impulses and be drawn back into the classroom and the learning experience. The tenor of the class is dictated by the class itself. For example, a group with good verbal skills will stress written skills. Some material is available for replication.

The Students

The fourth, fifth and sixth graders in Impulse Education are screened by the New York City Board of Education for their special education placement. They are all tested and certified. The program could be applied to all grades. Generally, 10 youngsters is the suggested maximum, with a balance of "acting out" and "acting in" students. The group meets twice weekly throughout the school year.

The Staff

Cullen, who developed his own model for this one-person operation, has 10 years' teaching experience. He has worked as a teacher/psychologist in a pre-school program at District #17, as a regular classroom teacher, a Montessori teacher and a teacher of emotionally handicapped children.

Materials and Facilities

The great need is for books in the general category of English, since the program centers on teaching verbal and written skills. Cullen finds that the literature of Jean Piaget, Koholberg and Joseph Wolpe is particularly suitable. Testing materials are also needed.

Outside Resources

Field trips can function as rewards for demonstrated socially acceptable behavior. The class chooses the particular event, with the teacher as the arbiter. For example, a trip to the movies might be overruled since that would interfere with the normal course of schoolwork.

Overall Value

"The program," says Cullen, "is helpful in academic, social and emotional areas. With behavior modification comes maturity, both personally and socially. A problem is identified, acted out in a safe environment and discussed, and anti-social behavior (anti-social impulses) are rechanneled into socially acceptable behavior (socially acceptable impulses)."

More Information

John James Cullen
P.S. 154K, District 15
11th Avenue and Windsor Place
Brooklyn, NY 11215

Telephone: 330-9333

Principal: Harvey Possner

High School Reading

Grades 6 through 8

Learning Workshop for Emotionally Handicapped Children

The Program

This program assists CEH (children with emotional handicaps) teachers in diagnosing and correcting specific learning problems. The Learning Workshop functions as a resource center for the students and helps classroom teachers implement the IEPs (individual educational prescriptions). The program was established on the premises that children learn through different modalities and that determination of a child's strengths and weaknesses is the yardstick for maximum learning. These are identified by a battery of tests: the Slinguland Screening Test, the Gates McKillop Reading Diagnostic Test, the Specific Language Disability Test and the Mann Suiter Tests, Screens and Inventory. Results on these tests determine perceptual problems: visual, auditory, kinesthetic and tactile. For non-readers, the prescribed remediation includes visual training and auditory discrimination. Throughout this program, the basic question remains: What comes first, the emotional disturbance or the learning disability?

The Students

The students are sixth, seventh and eighth graders with an achievement level ranging from intermediate to below average. The workshop has from one to three students at a time, meeting every other day for one period. There are about 20 students involved in the program.

The Staff

Program developers Annette DiMino and Peter Smergut have a combined educational background of 14 years. They coordinate the program by having designated periods—"the more the better," as they put it—and eliciting support, not only from the principal, but also from other teachers.

Materials and Facilities

The following materials are used: *The Reading Correction Kit* (Wilma Miller), *The Perceptual Skills Curriculum* (Walker Educational Book Corp.), *Handbook on the Remediation of Learning Disabilities* (Valit) and Science Research Associates Reading Laboratory. Cassettes include *Phonic Analysis Reading* and *Blends & Diagraphs Reading*. Filmstrips include *Listening Clearly: Auditory Readiness*.

Outside Resources

None are needed.

Overall Value

Visual training and auditory discrimination has a beneficial effect on reading skills. Students demonstrate growth and progress in the skills that are corrected. Their ability in specific language skills increases and their classroom performance and attitude improve.

More Information

Annette DiMino and Peter Smergut
I.S. 53Q, District 27
1045 Nameoke Street
Far Rockaway, NY 11691

Telephone: 471-6900

Principal: Michael Margelio

Intermediate and Junior High School Reading

Grades 6 through 8

Repetitive Vocabulary

The Program

This is a reading program designed for non-readers or those with learning disabilities. Students are given a pretest consisting of a word list as well as a reading of the words in context. "Often, these youngsters are not able to read any words at all," says program developer Benjamin Piltch, "so we work with them individually. Total non-readers can achieve some success in an academic setting if the reading material is repetitive, the ideas interesting, and the new vocabulary slowly integrated." In the program itself, a teacher or peer reads a sentence from a specially prepared book while the student looks at it. Then the student tries to read the second sentence. The teacher corrects errors immediately, just by saying the word. Each new page introduces one to four new words, while repeating those that are familiar. Once a student shows mastery of most of the words on a page, he moves on to the next. Thus, he sees progress as he completes the book. Piltch has developed four of these special books with stories which begin like this: Louis wants a job. Louis wants a good job. Louis wants a good job to make money. He wants a job. Piltch is available to consult with teachers interested in replicating the program and/or developing their own repetitive vocabulary books.

The Students

One class of about 18 handicapped sixth-, seventh- and eighth-grade students of mixed backgrounds participate. They include the mentally retarded, emotionally disturbed, learning disabled and brain injured, and even youngsters who are far behind in reading. They meet for one period a day. While half of the class works with this program, the other engages in different activities.

The Staff

Piltch, a reading teacher for 17 years, first tried his program with a youngster who was a total non-reader and had a behavior problem as well. When he saw success, he expanded the program and included youngsters from the gifted classes who provide individual tutoring twice a week. Piltch has received a state grant and has published eight books. Among them: *How to Fill Out an Application* (Frank E. Richards, New York) and *Eddy in School* (Fearon Publishers, Belmont, CA). He receives excellent support from his principal. This program is designed so that it can be implemented by a teacher, paraprofessional, parent or student tutor.

Materials and Facilities

Besides using Piltch's books, teachers can develop their own reading materials based on their students' experiences. Students can even select their own topics. A ditto machine and staples are needed to put the books together.

Outside Resources

None are needed.

Overall Value

Young readers need to find success for the sake of their self-image, as well as to gain the information necessary for their survival in the adult world. This program helps fill that need. "At least 30 youngsters to date have experienced satisfaction from using the books," says Piltch. "They don't feel they're babyish. At the same time, they don't feel overwhelmed by the material, and the small success they achieve, such as mastering 50 or so words, can dramatically change behavior problems. No one in this reading program has been suspended since starting it."

More Information

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School Improvement
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Principal: Michael Margello

Junior High School Mathematics

Grades 9 through 12

Remedial Mathematics for Emotionally Handicapped Adolescents

The Program

The program was designed by Robyn Smith Forman as a means of translating mathematical computations into everyday experiences to which emotionally disturbed and socially maladjusted students can relate. The students' activities center on 10 shops and businesses commonly found in shopping malls, from a pizza parlor to a bank. A simple three-dimensional cardboard replica of the shopping mall and each store lends credibility, interest and clarity to the project. The reading-deficient students are given written mathematics problems to solve in each store. Non-readers are given activity sheet instructions recorded on cassette tapes. Forman introduces the mathematical problems to be encountered. Then, students choose the store they wish to visit (they are expected to eventually complete shopping trips to all 10 stores). Their progress and achievements are recorded on their activity score card. Students may work alone or compete with other members of their group. In the group situation, the first person to complete all the tasks successfully is the winner.

The Students

Twelve members of a junior high school special-education class for emotionally disturbed and socially maladjusted adolescents participate in the program. They range in age from 12 to 16 and meet in groups of three students each, three or four times a week. The period lasts from 15 to 45 minutes, depending on the attention span of the students.

The Staff

The program was devised and is administered by Forman, a former classroom teacher now specializing in work with emotionally disturbed teenagers. Forman had previously taught remedial reading and her observations on how nonreaders or poor readers respond to auditory stimulus laid the groundwork for this program. She is assisted by a paraprofessional.

Materials and Facilities

A conventional classroom with a blackboard provides a suitable setting for the program. Of prime importance is the replica of the shopping mall. It can be fashioned from four pieces of cardboard held together with glue and Scotch tape, with store fronts drawn with magic markers and crayons. Cardboard people and cars add to the reality of the scene. Replicas of money aid the students in their computations. Forman's sample plan of a shopping mall, the activity score card, activity sheets for each store, and answer key are available on request. Teacher-made rexo copies of the last three are suitable for class use.

Outside Resources

Forman's program was used in conjunction with the Math ISS Program of District 18 and is available from Harvey Garner, Superintendent, District 18. Additional ideas for activities can be found in the Continental Press "Math Kit Step-by-Step," Unit B.

Overall Value

Presenting computation processes as a game or as an experience with personal meaning interests students with sometimes severe learning problems. "I wanted to spark their imagination and take mathematics into an area they could relate to," says Forman. She has found that even resistant problem-solvers become involved when it is *their* trip they are planning and need to know exactly how much it will cost; or how much interest the bank owes them on *their* savings account; or how many pizzas they will need for *their* party.

More Information

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Principal: Arthur Forrest

Junior High School Science

Grades 9 through 12

Study for the Emotionally Handicapped

The Program

This program is designed to increase emotionally handicapped students' understanding and appreciation of the interaction between living things and their environment. Through direct observation of small animals in different habitats, students become aware of structure-function relationships in nature and the role of the physical environment in biological adaptation. The vivaria constructed in the classroom to house small lizards, snakes and amphibians are focal points for discussion and definition of such concepts as food "webs," predation, energy transfer, and adaptation. The program focuses on four distinct habitats: rain forest, forest, wetland and desert. An interdisciplinary approach is utilized in this program which complements a traditional curriculum in ecology. Relevant concepts in geography, earth science, botany, anatomy and chemistry are introduced.

The Students

Fifty junior high school students ranging in age from 12 to 15 years participate in this program which is specifically designed for students with serious emotional and learning handicaps. The students are black and Hispanic from East and Central Harlem. Most have experienced chronic academic failure, have serious disabilities in reading and language and have had only limited exposure to natural or physical science. For this reason, textbooks and written assignments are de-emphasized in favor of a concrete "hands-on" approach. Opportunities are given for students to observe, record and verbalize. Appropriate teacher-made texts are utilized, although students are also encouraged to make use of library materials and magazines.

The Staff

This program was developed by Peter Kussin, a special educator with an extensive background in natural science. Some knowledge of ecology, earth-science and biology is necessary, but this information is readily acquired. A willingness to handle and care for small animals is a prerequisite. Paraprofessional assistance is vital where the students need individual attention and extensive structure. The program is supported by the principal of the school and the special education supervisor.

Materials and Facilities

The minimum space requirement is one classroom with an electrical outlet. A sink and refrigerator in the room are helpful (electricity must remain on over the weekend). Required materials include three or four fish tanks (20-gallon size or larger), flourescent light fixtures (aquarium type), floodlights and suitable fixture, heater tape, timer, screen tops and suitable substrates (i.e., beach sand, woodchips and soil).

Outside Resources

The American Museum of Natural History, the Bronx Zoo's Reptile House, The Gateway Instructional Center and the Wave Hill Center are valuable outside resources. Field trips are a useful adjunct to this program. The New York Herpotological Society is another excellent source of information and assistance. A selected bibliography includes:

Conant, Roger. *A Field Guide to Reptiles and Amphibians of Eastern North America.* Boston: Houghton Mifflin, 1975.
Sprackland, Robert. *All About Lizards.* Neptune City, NJ: TFH Publications, 1977.
Switak, Carl. *The Care of Desert Reptiles.* West Nyack, NY: Dexter Press, 1976.

Overall Value

"This program provides the structured, concrete experience so important to handicapped students," according to Kussin. "The opportunity to observe and compare living things in different habitats is a stimulus to learning in a content area. The program enhances the students' abilities in gathering and comparing data, classifying and creating and testing definitions. An unexpected but entirely welcome benefit of this program is its soothing effect on troubled youngsters. The technique of crisis intervention is broadened to include the use of small animals."

More Information

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Principal: Lorraine Mann

Special Education

Grades K through 12

Community Awareness, Safety and Travel (Cast)

The Program

The Community Awareness, Safety and Travel Program (CAST) involves taking up to four emotionally disturbed autistic youngsters at a time out of each class for a "real-life experience." This could be a visit to the neighborhood grocery, buying an apple, handling money, meeting a storekeeper. All the while, the teacher may take pictures or videotape what goes on. In this way the emotionally disturbed youngsters have a first-hand experience that can be fully explored back in the classroom. In addition to community awareness, safety and travel concepts are also dealt with. The youngsters learn the limits of the curb, the dangers of traffic, and what to look out for when they go out. Because most of these youngsters are very sheltered and not allowed outside of the house by themselves, this program "brings them out," giving them opportunities to behave in public and function in the community.

The Students

Fifty autistic and autistic-like youngsters between the ages of five and 17 participate in this program. About half of them are verbal, and their backgrounds are mixed. They receive attention individually or in small groups. The schedule is very flexible.

The Staff

This program was developed by Allan Kahn, who has been working at the Seaside Center since its beginning in 1972. Kahn is the CAST program coordinator and cluster teacher. He has the cooperation of eight classroom teachers, eight paraprofessionals, and the administrative coordinator, as well as the principal's full support.

Materials and Facilities

A camera is necessary, together with the means of developing and printing or projecting photographs. Also, a video-cassette tape recorder is used extensively. The rest of the materials are teacher-made for the individual student. For example, a photograph of a youngster wearing a fireman's hat can be mounted on construction paper with a sign saying, "John is wearing a fireman's hat." This is the student's reading matter and the basis for language development.

Outside Resources

These include the street and the community. "We make contact with local storekeepers who will allow us to come in," says Kahn, "as well as with industries where the youngsters can see workers at jobs that they could do." Kahn notes that sufficient personnel should be made available to take small groups into the community.

Overall Value

The classroom isn't enough. These disturbed youngsters need the community awareness that is taken for granted by normal children. The youngsters enjoy the program; they express this verbally and otherwise. This is a non-frustrating approach. Since the printed word is related to real experience, there is built-in reinforcement and built-in success. "These are not retarded children," states Kahn. "There's a lot going on in their minds; it's just a matter of unlocking it."

More Information

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